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NUMISMATIC NOTES AND MONOGRAPHS

No. 155

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NO. 155-157

THE CONFEDERATE COINAGE  
OF THE ARCADIAN  
IN THE FIFTH CENTURY B.C.

BY RODERICK T. WILLIAMS



THE AMERICAN NUMISMATIC SOCIETY  
NEW YORK

1965



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BROADWAY BETWEEN 155TH & 156TH STREETS  
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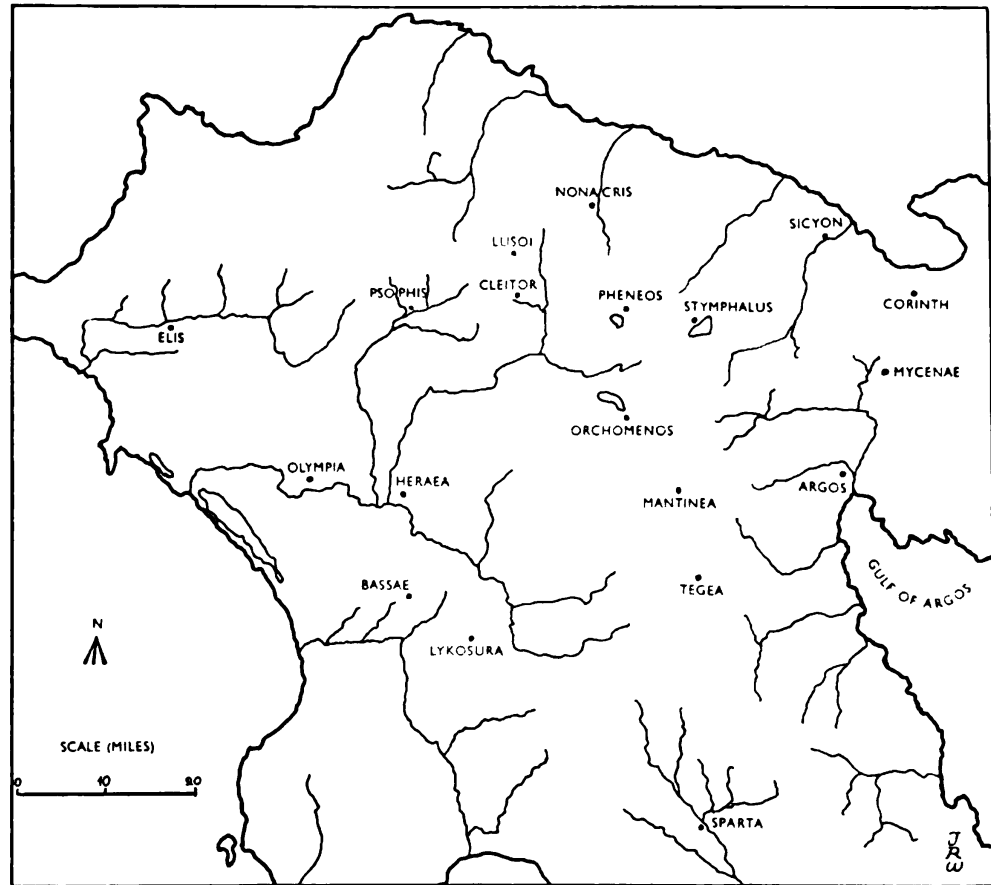
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# NUMISMATIC NOTES AND MONOGRAPHS

*Number 155*





# The Confederate Coinage of the Arcadians in the Fifth Century B.C.

By RODERICK T. WILLIAMS



THE AMERICAN NUMISMATIC SOCIETY  
NEW YORK  
1965

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## PREFACE

The coinage of half-drachmas and obols of Aeginetan weight with Zeus, usually seated, as an obverse type, and on the reverse, usually inscribed with ARKADIKON or an abbreviation of it, the head of a goddess, and of certain rare half-obols, has for the sake of convenience throughout this study been referred to as the Arkadikon coinage.

From the first the Arkadikon coinage has been widely thought to be religious and agonistic in character. Curtius<sup>1</sup> associated it with the sanctuary of Zeus on Mount Lycaeus. Leake<sup>2</sup> first brought the coinage into relation with the Lycaean Games and supposed that the mint was Lycosura.

Later, Imhoof-Blumer,<sup>3</sup> after transferring the coins with the head of Hera on the obverse and ΕΡ or ERA on the reverse from Heraclea in Bithynia to Heraea in western Arcadia, assumed that Heraea became the mint of the Arkadikon coinage when she had ceased striking the coins in her own name. Of Imhoof-Blumer's many valuable contributions to numismatics not the least has been his work on Arcadian coins, and his dictum on establishing the correct order of the issues of the Arkadikon coinage has been a warning and a challenge: "In dieser Richtung das absolut und unbestreitbar Treffende zu finden, gehört überhaupt zu den Unmöglichkeiten." (*ZfN* 1876, 289).

Gardner, after accepting Curtius' views,<sup>4</sup> was later converted by Imhoof-Blumer's theory.<sup>5</sup> He stressed the connexion of the Arkadikon coinage with that of Elis-Olympia, comparing the inscription ARKADIKON with that of ΟΛΥΝΓΙΚΟΝ which occurs on two didrachm

<sup>1</sup> E. Curtius, "Einige Bemerkungen über Arkadische Münzen," *Beiträge zur älteren Münzkunde*, 89ff.

<sup>2</sup> W. M. Leake, *Numismata Hellenica*, 20ff.; *Supplement*, 110.

<sup>3</sup> F. Imhoof-Blumer, *Monnaies grecques*, 189; *NZ* 1878, 106. For early Heraean coins cf. *BMC Pelop.*, pl. 34, 1-7; E. Babelon, *Traité* II, i, pl. 38, 1-7.

<sup>4</sup> P. Gardner, *The Types of Greek Coins*, 28.

<sup>5</sup> *BMC Pelop.*, lvii.

dies of Elis-Olympia.<sup>6</sup> Babelon<sup>7</sup> also accepted the theory of Imhoof-Blumer and provided an answer to the query as to why the Heraeans in particular should have issued coins in the name of all the Arcadians, for he asserted that the Heraeans held the presidency of the Lycaean Games.

Weil, in two admirable articles,<sup>8</sup> showed caution in respect to the existing theories and expressed the suspicion that the coinage might not have been altogether religious in character. Dr. Richter<sup>9</sup> went a step further and said that the coinage was political but with a religious background, but most authorities have followed Imhoof-Blumer and Babelon, assuming that the Heraeans struck the coins for the Lycaean Games, and it was only recently that Professor Wallace<sup>10</sup> connected the beginning of the Arkadikon series with the intrigues of Cleomenes in Arcadia in ca. 490 B.C.; and, as a result, he saw in the coins a definite political character.

The survey shows that there have been several problems associated with the series: the site of the mint; the character of the coinage, religious or political; the date of the beginning of the series (a date before 490 would invalidate the theory of a political character); the identity of the deities on the coins and the interpretation of the inscription ARKADIKON. From the present study of all the available dies and the establishment of the order in which they were struck it is hoped that the answers to these problems have, where possible, been found; that new evidence has been offered for the history of the Peloponnese in the period 490 to 418, and that a coinage of charm and interest will become more widely known.

I am grateful to the many museum curators, collectors and art-dealers who have sent me information and casts or photographs, particularly Mr. G. K. Jenkins who also put the British Museum documentation at my disposal, to Dr. B. K. Wasson, who, when it

<sup>6</sup> Seltman, *Olympia*, 13, no. 37; 21, no. 72.

<sup>7</sup> *Traité* II, i, 843.

<sup>8</sup> R. Weil, "Arkadische Münzen," *ZfN* 1882, 18-41; "Nochmals das alt-arkadische Gemeinwesen," *ZfN* 1912, 139.

<sup>9</sup> G. M. A. Richter, "Greek Bronzes Recently Acquired by the Metropolitan Museum of Art," *AJA* 1939, 194.

<sup>10</sup> W. P. Wallace, "Kleomenes, Marathon, the Helots, and Arkadia," *JHS* 1954, 32.

was realised that our work was overlapping, graciously allowed me to continue with the coinage of the fifth century Arcadian League, to my daughter for making the map, and to the University of Durham for financial assistance.



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 VIII (Dec. 8, 1949): 832 (118e).  
 X (June 22, 1951): 283 (251a), 284 (310a).  
 XIII (June 17, 1954): 1141 (58a).  
 List 114: 25 (72b).  
 List 116: 148 (77a), 150 (138d), 152 (187a), 151 (204b), 149 (278b).  
 List 169: 13 (307a).  
 List 199: 17 (20c), 12 (30a), 18 (43a), 13 (62e), 15 (111a), 14 (153c), 16 (229b), 19 (240d), 20 (245a), 21 (265a), 22 (301a).  
 List 249: 22 (46c).  
 Unlisted: 82c, 97a, 137a, 157a, 159b.  
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 IV (June 27, 1922): 607 (168d), 609 (212d), 608 (237e).  
 V (June 18, 1923): 2246 (84b), 2245 (134a), 2243 (150e), 2244 (251b).  
 VII (June 23, 1924): 1282 (5a), 1283 (85a), 1281 (114a), 1284 (251c).  
 X (June 15, 1925): 604 (79a), 603 (138b).  
 XII (Oct. 18, 1926): 1570 (12a), 1571 (20a), 1572 (30d), 1575 (75b), 1574 (105a), 1573 (245b).  
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Unlisted: 84c.
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## CHRONOLOGICAL AND HISTORICAL ASPECTS OF THE COINAGE

PERIOD I. ca. 490—ca. 477 B.C.

### CHRONOLOGY

The date given for the beginning of the Arkadikon coinage has ranged within the bracket 520–480,<sup>11</sup> but hitherto a firm dating has not been possible, because there has been no certainty about the identification of the first issues; for the most archaic-looking coin need not, of course, come at the head of the series.<sup>12</sup>

A date as late as 480 for the inception of the coinage must be ruled out, because it will be shown that Period II begins ca. 477 (pp. 4f.), so that there is insufficient room for Period I between 480 and 477, not only because of the number of dies involved (34 obverse and 29 reverse), but because of the development in style between the earliest and latest dies. At the other end of the bracket few would still maintain a 6th century date in view of the down-dating of the main coinages of Greece. The bracket, therefore, may be narrowed to ca. 500–490.

The heads of the goddess in Period I, at least those in sections 1 and 2 (PLATE I), show a marked resemblance to those in Attic vase-painting of the decade 490–80. In black-figure there are the heads of the Athena Painter, e.g., the large head of Athena on the Dresden lekythos ZV 1700,<sup>13</sup> on which there is the same shape of nose and chin as on several of the heads of Period I; or the seated Athena on Athens 1138,<sup>14</sup> where the head is smaller, more dome-shaped, and with sharper features which come nearer the heads of section 1, particularly R. 6. Haspels<sup>15</sup> dates the Athena Painter's developed stage, to which the above lekythoi belong, to the decade 490–80.

<sup>11</sup> 520: R. Weil, *ZfN* 1912, 139ff. 510: Babelon, *Traité* II, 565. 500: Seltman, *Greek Coins*, 97. 490: Babelon, *Traité* I, 850. 480: *BMC Pelop.*, lviii.

<sup>12</sup> For the reasons that the coins of Period I have been placed at the head of the series see p. 38.

<sup>13</sup> E. Haspels, *Attic Black-figured Lekythoi*, pl. 45, 2.

<sup>14</sup> Op. cit., pl. 47, 2.

<sup>15</sup> Op. cit., pp. 147, 163.

A style of head similar to that in sections 1 and 2 can be seen frequently on late archaic red-figure vases. R. 1 and R. 4 resemble the heads of the athletes on the Tarquinia calyx-krater and the Boston amphora by the Kleophrades Painter.<sup>16</sup> Beazley dates the calyx-krater to the first decade of the 5th century, and the amphora later than the calyx-krater: R. 1 and R. 4 are the earliest dies of the Copenhagen Master who inaugurated the series. The profile of R. 8 can be matched with that of the Brygos Painter's maenad on the white-ground interior of the Munich cup;<sup>17</sup> there is the same firm nose and rounded chin, but the maenad's eye is close to those of the earlier dies R. 1, R. 4 and R. 6, while that of R. 8 is wider. R. 6 may be compared with the Harrow Painter's girl on the Cambridge jug,<sup>18</sup> or with the Oxford *Nike* by the Tithonus Painter,<sup>19</sup> or with the girl in the Brussels cup by Onesimos,<sup>20</sup> all vases of the decade 490–80.

Closely dated female heads on coins belonging to this period before the Demareteion are rare. The head of Athena on the Ionian Revolt electrum stater<sup>21</sup> has its closest counterpart in the second reverse of section 3, R. 18 (PLATE II), which may, as it is argued in that section, be as early as the dies of sections 1 and 2, and which derives its style from Corinth, but the stater seems earlier than dies of original style in sections 1 and 2. Certainly the reverses of sections 1 and 2 would not look out of place among the final reverses of Boehringer's Group II (510–485) of the Syracusan coins, nor for that matter would those of section 3.

The above comparanda do not establish a firm and close date for the beginning of the Arkadikon series, but they do indicate that a date nearer 490 than 500 will be more likely. Moreover, since the coinage will be shown to have been political in character (p. 18), it would seem unreasonable then not to accept a date of ca. 490 for

<sup>16</sup> Beazley, *ARV* 185/35; see J. Beazley, *Der Kleophrades-Maler*, pls. 17–18, 1–3. Beazley, *ARV* 183/9; see Beazley, *op. cit.*, pl. 18,4.

<sup>17</sup> Beazley, *ARV* 371/15; see P. Arias and M. Hirmer, *History of Greek Vase Painting*, pl. XXXIV.

<sup>18</sup> Beazley, *ARV* 276/77; see *CVA*, pl. 40,4.

<sup>19</sup> Beazley, *ARV* 309/14; see *CVA*, pl. 34,2.

<sup>20</sup> Beazley, *ARV* 329/130; see *CVA*, pl. 1,3; also see M. Robertson, *Greek Painting*, 105.

<sup>21</sup> Ex Jameson. A Baldwin Brett, *Electrum Coinage of Lampsakos* (1914), pl. 2,11; see Richter, *Kouroi*, fig. 483 (enlarged); Seltman, *Greek Coins*, pl. 12,3.

the inception of the coinage, a date to which all the political considerations of Cleomenes and his Arcadian confederacy clearly point, as Professor Wallace postulated from a study of the historical evidence.<sup>22</sup>

#### HISTORICAL ASPECTS

The sequence of events in Herodotus VI, 49ff. leading up to this confederacy is as follows. When the emissaries of Darius arrived in Greece in the early summer of 491 to demand earth and water, Aegina submitted. Cleomenes made an abortive attempt to demand satisfaction of the Aeginetans, but in his absence from Sparta was slandered by his colleague in the kingship, Demaratus. On his return he allied himself with Leotychides, who prosecuted Demaratus questioning the legitimacy of the latter's birth. The Pythia, bribed by Cleomenes as his opponents alleged, pronounced Demaratus illegitimate, Demaratus was deposed, and Leotychides was made king. There followed Cleomenes' second visit to Aegina accompanied now by Leotychides, and Aeginetan hostages were deposited with the Athenians, but on the king's return to Sparta Cleomenes' sharp practice was discovered and he went into exile first to Thessaly and then to Arcadia. Here, probably in late 491 and 490, he attempted to form an anti-Spartan confederacy, calling together the leading Arcadians to Nonacris to swear allegiance by the Styx. The mention of Nonacris suggests that the centre of Cleomenes' activities was in the north of Arcadia.

It has usually been assumed that Cleomenes' attempt to form this confederacy was abortive, but the continuation of the Arkadikon coinage from ca. 490 implies not only its existence but also its survival. It is unlikely that Cleomenes would have had this success had not Arcadia already been hostile towards Sparta in the period before 480, for her hostility to Sparta was the reason why Hegestratos, the seer, had taken refuge there;<sup>23</sup> Mantinea's contingent arrived late for Plataea, as did that of Elis,<sup>24</sup> but whereas Elis' name appeared on the Serpent Column, that of Mantinea did not.<sup>25</sup> Tegea arrived in

<sup>22</sup> *JHS* 1954, 32.

<sup>23</sup> Herodotus IX, 37.4.

<sup>24</sup> *Hdt.* IX, 77.

<sup>25</sup> *Sylloge Inscriptionum Graecarum*, ed. W. Dittenberger, 31; *Greek Historical Inscriptions*, ed. M. N. Tod, 19.

time for the battle, but her claims for the honour of holding the left wing were not supported by Sparta; this might have been an unprejudiced decision, but it might be read as a deliberate slight on the part of Sparta against Tegea.<sup>26</sup> Yet at Thermopylae<sup>27</sup> Arcadia had been well represented, and if there was any resentment on the part of the Arcadians towards Sparta, it was not allowed seriously to interfere with the interests of the Greeks as a whole, and that some Arcadians took pride in the Greek achievement against the Persians is indicated, according to my interpretation, by the placing of a wreath of olive around the goddess' head on the reverse of a few of their coins, a practice which provides a date for the beginning of Period II and the end of Period I.

#### PERIOD II. ca. 477—ca. 468 B.C.

##### CHRONOLOGY

This wreath, consisting of three olive leaves similar to those on Athena's helmet on the Athenian "owls," appears above the *stephane* of the Arcadian goddess on the first few reverses, R. 30–33 (PLATES II, III). The resemblance to the earliest three-leaved Athenas<sup>28</sup> is further marked by the fact that the hair of the Arcadian goddess above her *stephane* is left quite smooth, so that she seems to be wearing Athena's helmet, and on the first die, R. 30, the queue is beaded, as is the hair of Athena down her neck; on the brow the hair of both is similar in arrangement and technique; and in general there is a close resemblance between the first Arcadian wreathed head (R. 30) and the early three-leaved Athenas. The second Arcadian reverse (R. 31) has more of the Arcadian style in it with its dolichocephalic long-necked physiognomy.<sup>29</sup> Three leaves have been specified as being on the Arcadian heads: in the second die, R. 31, there certainly are three; but on the first, R. 30, three are visible, but a flaw hides that part of the head where a fourth leaf may possibly have

<sup>26</sup> Hdt. IX, 26.

<sup>27</sup> Hdt. VII, 202.

<sup>28</sup> Seltman, *Athens*, Group N, pl. 19, A. 280ff. A. 279, although it has a wreath of three leaves, resembles the style of the earliest dies of N., in which the wreath has four leaves (A. 272–8).

<sup>29</sup> See pp. 39 f. for a description of the "Arcadian" style.

been set: there is barely room for it, but if it were there, it only increases the connection between the reverses of this Period and the earliest wreathed "owls," on which four leaves appear on the helmet of the first few dies and then three become the rule.<sup>30</sup>

It seems certain that these Arcadian wreathed heads were cut under the influence of the Athenian. This imitation will have most point if the Arcadian dies were produced at a time not very long after, in fact as soon as possible after, the introduction of the wreathed "owls" in Athens, so that the wreath should commemorate the same event. Unfortunately the date of the introduction of the latter is still disputed. Seltman's conclusion that the wreath was introduced in commemoration of Marathon had been widely accepted until recently when first Sorge<sup>31</sup> showed that Marathon could not have been fought during that particular phase of the moon which is represented on the reverse behind the owl. This objection to a 490 date for the wreathed "owls" has of course been countered by arguing that the moon has no connection with the time of the battle, but perhaps represents the power of Persia waning before that of Athens.<sup>32</sup> But more recently C. M. Kraay<sup>33</sup> has produced most cogent reasons for a rearrangement of Seltman's grouping and for a down-dating which should preclude a 490 date for the introduction of the wreathed "owls."

It is realised that some authorities<sup>34</sup> are of the opinion that the leaves on Athena's helmet and on the head of this Arcadian goddess are purely decorative, for they are used not infrequently on Attic vases for female heads generally. This argument would have point if it had been proved that the three-leaved wreath for Athena's

<sup>30</sup> See n. 28.

<sup>31</sup> Hermann Sorge, "Der Mond auf den Münzen von Athen," *Jahrbuch für Num. und Geld.* II (1950/51), 7 ff.

<sup>32</sup> But no convincing interpretation of the moon, which occurs before the introduction of the wreath, has yet been offered.

<sup>33</sup> "The Archaic Owls of Athens: Classification and Chronology," *NC* 1956, 43 ff. and "The Early Coinage of Athens: A Reply," *NC* 1962, 417 ff., where Kraay replies to Wallace, *op. cit.*, p. 23; but Wallace was more concerned with establishing ca. 510 as the date for the introduction of the "owls" than with maintaining ca. 490 for the introduction of the wreathed "owls." E. S. G. Robinson, "A Hoard of Archaic Greek Coins from Anatolia," *NC* 1961, 109 confirms Kraay's dating.

<sup>34</sup> F. Mainzer, "Das Dekadrachmon von Athen," *ZfN* 1926, 37.



helmet was found on vases widely before its appearance on Athenian coins, and even then it would not disprove the theory that the wreathed "owls" reflect a specific event. Reference has already been made to the heads of Athena painted by the black-figure artist, the Athena Painter, who flourished in the decade 490–80. Haspels suspects and Beazley believes<sup>35</sup> that the Athena Painter's work is an early phase of the Bowdoin Painter, who also paints large heads of Athena, but whereas the helmets of the Athena Painter have no wreaths, those of the Bowdoin Painter do. It has been pointed out by others<sup>36</sup> that the wreathed heads of the Bowdoin Painter imitate the earliest "owls" with three-leaved helmets. The Bowdoin Painter began work in the Late Archaic period but his main activity belongs to the Early Classical period, and his Athena-head vases with the wreathed helmet are not among the earliest of his works and are not usually dated before 480. That this Athena-Bowdoin Painter drew Athena without the wreath before 480, but with the wreath after 480 seems significant, and if he was imitating the wreathed "owls," as most assume, it is unlikely then that the wreathed "owls" were introduced before 480.

If it is accepted that the wreathed Arkadikon issues were struck in imitation of the wreathed "owls," then the likelihood that ca. 479–8 was the date for the introduction of the wreathed "owls" is considerably increased; for the crowning with olive of the Arcadian goddess gains the greatest point if it refers to the same event as the wreathed "owls." Marathon was an Athenian victory, but Plataea or simply victory over the Persians in 479 was something that was common to Athens and Arcadia. In short, just as Syracuse was marking her victory over the Carthaginians at Himera by the issue of the Demareteion and smaller denominations with their city's goddess wreathed in olive, so the Athenians and the Arcadians added leaves of olive to the heads of their goddesses on their coins, both in large and smaller denominations, after the defeat of the Persians in 479.

<sup>35</sup> Haspels, *op. cit.* (n. 13 above), 163; Beazley, *ABV* 522. The Athena-Bowdoin painter's wreathed heads are: Beazley *ARV* 685/165, 687/219, 687/221.

<sup>36</sup> Seltman, *Greek Coins*, 91, n. 4.

Further, an examination of Boehringer's arrangement of the reverse dies immediately preceding the Demareteion at Syracuse<sup>37</sup> and the obverse dies immediately preceding the three-leaved Athena heads at Athens<sup>38</sup> will reveal a marked resemblance in the treatment of the hair. In both, the regular method<sup>39</sup> of treating the hair along the brow had been by the engraving of a fringe of diagonal lines. On the appearance of the Demareteion and the three-leaved Athenas there is a marked change; in both the hair along the brow is represented by horizontal waves following the brow and by a prominent loop over the temple, and the beginning of the wave on the far side of the brow can be distinguished. The art of the Demareteion is immeasurably superior, but it is difficult to deny that they are contemporary.

There is the same situation in the Arkadikon coinage. The goddesses of Period I have a fringe of hair along the brow and temple; the wreathed heads of Period II show, for the first time, waves of hair along the brow and a loop at the temple. The conclusion must be that these too are contemporary with the Demareteion and the early three-leaved Athenas.

Plataea was fought in the late summer of 479. It is unlikely that the new Athenian issues would have been circulating before 478, and perhaps 477 is a more likely date for the first appearance of their Arcadian counterparts, especially as the latter probably do not imitate the earliest wreathed Athenas, i.e., the small issue of those with four leaves.

The mint, then, which had produced the coins of Period I now began in ca. 477 the issue of the wreathed heads of the goddess. But side by side with these latter coins there have been distinguished two other contemporary divisions, which must, as it will be shown, represent the issues of two other mints. The mint problem now must be examined from the beginning.

<sup>37</sup> E. Boehringer, *Die Münzen von Syrakus*, pls. 13-14.

<sup>38</sup> The four-leaved Athena heads, Seltman A. 272-8, pls. 18-19 and, if Seltman's arrangement is followed, Group M, pls. 16-18, or if Kraay's classification is adopted, Group E.

<sup>39</sup> Kraay has noted this point of technique in the rendering of the hair of the brow. It is not suggested that this was the only way of rendering the hair along the brow in Syracuse and Athens. Earlier attempts at representing waves can be seen in Boehringer and Seltman, but these are always ineffective and bear little resemblance to the later technique.

## THE MINTS AND THEIR LOCATION

A location for the Arkadikon mint was first seriously suggested by Imhoof-Blumer and this for Heraea in western Arcadia. To support his theory he used the following arguments:

1. He thought that the Arkadikon series began when the early Heraean issues ceased; and that the late Heraean issues began again when the Arkadikon series ceased.
2. He saw a resemblance between the early Heraean heads (PLATE XIV, a-f) and a head of one of the Arkadikon series (R. 74, PLATE VI); and a resemblance between the latest Arkadikon heads and the first of the late Heraean.

That the early Heraean series broke approximately at the same time that the Arkadikon series began cannot be disputed. It might, however, be argued that there was a gap between them, on the grounds that the Heraean had no real reverse type, but simply an incuse with an abbreviation of the ethnic, whereas the Arkadikon coinage from its inception had a developed reverse type. On the other hand, L. H. Jeffery has noted that part of the Heraean coinage could be dated from the letter forms as late as ca. 475,<sup>40</sup> i.e., ca. 15 years after the Arkadikon coinage began. But even if it could be proved that the Heraean coinage broke off exactly at the same time that the Arkadikon began, it would not, of course, of itself follow that the Heraeans struck the coinage. It is true that the late Heraean issues began again about the time that the Arkadikon series ended, but several other Arcadian states also began coining on their own account at the same time.<sup>41</sup> The only conclusion is that these states, Heraea included, felt the need of small silver now that the Arkadikon mint had closed down.

In connection with Imhoof-Blumer's second argument, the resemblance between one of the Heraean heads (PLATE XIV, f), and the one Arkadikon head to which he refers, R. 74, is clear, but this Arkadikon head bears no stylistic relation whatsoever to any other Arkadikon head; it has a round incuse, whereas every other Arkadikon

<sup>40</sup> Jeffery, *Scripts*, 210, n. 3. She quotes Babelon, pl. 38,3, but she may mean 38,5, the letters of which are more developed.

<sup>41</sup> See Weil, *ZfN* 1912, diagram on p. 145.

reverse has a square one; and the style of the obverse, O. 86, with which it is linked, seems to be more advanced than the style of the head, and wherever the coin comes in the series, it can hardly come near the beginning, and, I suspect, may not have come from an official mint at all. Babelon, in trying to confirm Heraea as the mint of the Arkadikon coinage saw a resemblance between the same Heraean coin (f) and the Arkadikon, R. 25 (PLATE II), a resemblance which to me does not seem to go beyond the fact that both heads have the *krobylos* hair-style. The differences are far more numerous: on (f) the hair along the brow and temple is rendered by larger beads than elsewhere on the head, the beads on R. 25 are of uniform size; the *krobylos* on (f) is not convincing, and the hair seems to emanate from behind the ear, on R. 25 it falls naturally from the back of the head; the tail-ends of the hair are quite differently rendered in each case; on (f) the headband is beaded, on R. 25 probably plain; the nose on R. 25 is much larger; cheeks on (f) much fatter, almost cherubic; truncations are completely different. On PLATE XIV, a-f are illustrated the final obverses of the early Heraean issues in order to show that there are no resemblances between them and the earliest heads of Period I of the Arkadikon coinage. It cannot be denied, however, that there is a resemblance between the latest Arkadikon heads and those on the late 5th century Heraean coins, but no greater resemblance than one would expect from contemporary coins of the same area.

Babelon's theory that the Heraeans were the presidents of the Lycaean Games was presented without any evidence, but it has been accepted widely as a fact; yet when the fact that Mt. Lycaeus is in Parrhasian territory,<sup>42</sup> not Heraean, is remembered in conjunction with the defeat of the Heraeans by other Arcadians ca. 500-480, the claims of Heraea to have been the mint of the earliest Arkadikon coinage look less convincing.

The evidence for this defeat was presented by Dr. Richter in the publication of a bronze spear butt inscribed *ἱερός Τυνδαριδαίους ἀπ' Εραίων*.<sup>43</sup> in the Arcadian dialect and script. It is a dedication made by some Arcadians at their shrine of the Dioscuri in gratitude for

<sup>42</sup> E. Meyer in *RE* XIII, cols. 2235-2244.

<sup>43</sup> *AJA* 1939, 194.

their victory over the Heraeans. She dates it early in the 5th century, and with this date Dr. Jeffery concurs.<sup>44</sup> Richter herself suggests that this defeat was the cause of the cessation of the Heraean coinage, and she believed that the Arkadikon coinage which followed was political, but that it had a religious background. She thinks that Cleitor might have inflicted the defeat, for Pausanias<sup>45</sup> records that the Cleitorians dedicated a statue of Zeus as a tithe from the many cities they had reduced, and although the date of this Cleitorian statue is uncertain, Cleitor had a shrine of the Dioscuri, and it is interesting to note that Cleitor is not far removed from the point to which Cleomenes called the leaders of the Arcadians at the beginning of his intrigues ca. 490.

The problem of the mint is in fact more complicated than was imagined. According to this study one mint began coining in ca. 490. In the early seventies (Period II) this first mint was reinforced by two others for the duration of Periods II and III (ca. 477–ca. 460) and then the first mint and one of the additional mints ceased to operate, but the third continued (Periods IV and V) until ca. 418, although the output between ca. 460 and ca. 418 was considerably reduced. The grounds for the theory of this multiplicity of mints are as follows. After the end of Period I the series falls into three quite separate contemporary divisions:

1. The coins from this division come from the same mint which produced those of Period I, as is proved by die-links. After the end of Period I the dies of this division develop a distinctive provincial style, which has been termed "Arcadian." But although the "Arcadian" style occurs on most of the dies, the engravers largely depend on the other two mints for their *designs*.

2. A prolific group in which the goddess on the reverse wears her hair in a bun. There is a development from the profile face to the frontal and then to the threequarter view. With the exception of one half-drachma and one obol die the heads face right throughout the history of this mint: in the other divisions, 1 and 3, the orientation does not become stabilised until Period III, when the heads in 1 face right, and those of 3 face left. The style of the Zeus and of the

<sup>44</sup> Jeffery, *Scripts*, 210.

<sup>45</sup> V. 27.3. Pausanias is also the authority for the Dioscuri shrine.

goddess' head in this division 2 is very fine. The ethnic is usually written out in full.

3. The third division has at first a characteristic obverse with Zeus holding a thunderbolt in his left hand, and a sceptre in his right, while the eagle flies free in front of him; then the design of the other mints is adopted, in which Zeus has his sceptre in his left hand, while the eagle is near his extended right, and he has no thunderbolt. On the reverses the goddess frequently wears a *saccos*; these dies are often anepigraphic: later, the *saccos* is rare, and the ethnic becomes regular, almost always abbreviated to ARKA.

These three divisions with their independent styles develop contemporaneously. There is considerable die-linkage within each division, but there is, of course, no die-linkage between divisions. It might be argued that these divisions could be explained by the existence of three workshops in one city, but the regular style of each division differs so markedly one from the other that a wider separation than three workshops in one city must be postulated, and hereafter these three divisions are referred to as mints.

If it be accepted after an examination of the various issues that there were three mints striking the Arkadikon coinage for a period, the question arises as to their location. On an obverse, O. 121 (PLATE VIII), from the 2nd mint there is a unique representation of a standing Zeus holding a *phiale* or libation bowl in his hand. This figure must be identified as Zeus Meilichios, for the *phiale* is his symbol and attribute.<sup>46</sup> Tegea is the only Arcadian state with known connections with Zeus Meilichios,<sup>47</sup> and probably at the time when this die was being used (as will be shown below) was in alliance with Argos against Mycenae, and Argos was also a centre of Zeus Meilichios worship.<sup>48</sup> This die points to Tegea as the home of the 2nd mint.

<sup>46</sup> On two reliefs from the Piraeus (A. B. Cook, *Zeus, A Study in Ancient Religion* II, 2, p. 1106, figs. 942-3) there are two definite representations of Zeus Meilichios. In each of these Zeus is shown holding the *phiale*. Pausanias (II. 20.1) records that Polycleitus carved a statue of Zeus Meilichios for the Argives, and Imhoof-Blumer and Gardner believe that representations of this Zeus Meilichios appear on Argive coins of Septimius Severus and Plautilla (*Numismatic Commentary on Pausanias*, pl. K, 27, see Cook, *Zeus*, fig. 962); here too Zeus holds a *phiale*.

<sup>47</sup> IG V(2), 90, perhaps of the 4th century B.C.

<sup>48</sup> Paus. II. 20.1; see n. 46 above.



Further, it has been suggested that the frontal Gorgon's head was an important stage in the development towards the representation of the frontal and threequarter head of ordinary humans and deities.<sup>49</sup> The frontal and threequarter head of the goddess is the chief characteristic of this mint in Period III, and in this respect this mint anticipates all other Greek coin-producing states. It is significant that Tegea later produced trihemioiobols with the Gorgon's head as type,<sup>50</sup> so that it can be assumed that the Gorgon's head was a familiar Tegean blazon, and might well have influenced the engravers working for the mint in taking the lead in introducing the frontal and three-quarter aspect of the goddess' head. Further evidence suggesting the appropriateness of Tegea as the location of the 2nd mint is added below in connection with the allocation of the 1st and 3rd mints. Granted the multiplicity of the mints and the political character of the coinage (cf. p. 18) it would have been surprising if Tegea had not been represented.

In the allocation of the 1st mint, which was the sole mint for about a dozen years, and then, after being reinforced by the 2nd and 3rd, stopped striking coins along with the 2nd mint ca. 460, a case may be made for Cleitor. Cleitor, as Richter suggested, probably defeated the Heraeans and may have put an end to the Heraean coinage ca. 500-480 (cf. pp. 9f.); Cleitor was in the north of Arcadia and near the focus of resistance under Cleomenes (pp. 3f.). In attempting to locate the workshops of the Arcadian bronzes Dr. Lamb<sup>51</sup> came to the conclusion that Tegea probably was the centre where the finest bronzes originated (the 2nd mint, attributed to Tegea, also produced the finest coins of the three mints), but she also considered it likely that more than one centre was at work in Arcadia, and recorded that bronzes were found at Cleitor and Lusoi in the north. Lusoi struck no coins at the end of the 5th century, when, on the cessation of the Arkadikon coinage, several Arcadian states found it necessary to coin on their own accounts; but Cleitor did,<sup>52</sup> and Cleitor would seem to be a place, more cut off from contact with the

<sup>49</sup> J. Eddé, "Les figures de face sur les monnaies antiques," *RIN* 21 (1908), pp. 213 ff.

<sup>50</sup> *BMC Pelop.*, pl. 37, 6-7; see Babelon, *Traité* III, pl. 227, 9-10.

<sup>51</sup> *BSA* 1925, 146.

<sup>52</sup> *BMC Pelop.*, pl. 33, 8-9; see Babelon, *Traité* III, pl. 225, 15 ff.

Classical schools of art, where the provincial "Arcadian" style, a characteristic of the 1st mint during Periods II and III (but not Period I) could have been strong.

If the arguments put forward on p. 18 for the political character of the coinage are accepted, the claims of Mantinea, one of the most powerful Arcadian states, for being the location of the 3rd mint cannot be overlooked. It is first necessary to see how the allocation of the 3rd mint to Mantinea fits the pattern of beginning to coin in the early seventies of the 5th century (along with the 2nd), but of continuing until ca. 418, after 1 and 2 had stopped ca. 460. The allocation could fit very well for the opening of this mint. An important event in the development of Mantinea was the *synoikismos*, brought about, as Strabo records,<sup>53</sup> under the auspices of Argos; the *synoikismos* of Tegea Strabo mentions in the same sentence, and it could be understood from the Greek that Tegea's *synoikismos* too was assisted by the Argives, so that there would be some ground for believing that the *synoikismoi* were contemporary. There is no firm evidence for the date of either of these events: for the *synoikismos* of Mantinea a 6th century date has been suggested by Beloch;<sup>54</sup> Kahrstedt,<sup>55</sup> the 5th or early 5th; Dunbabin<sup>56</sup> connected the *synoikismos* of Mantinea with the first issues of her coinage with the bear type at the beginning of the 5th century; Busolt<sup>57</sup> suggested a date soon after the Persian Wars; Andrewes,<sup>58</sup> the late seventies of the 5th century; Meyer,<sup>59</sup> the period of the Messenian Revolt; for the *synoikismos* of Tegea, though earlier dates are conjectured, Hiller von Gaertringen has suggested ca. 476.<sup>60</sup> This latter date of the early seventies for the *synoikismos* both of Mantinea and Tegea has as much to commend

<sup>53</sup> VIII. 3. 2, "... Μαντίνεια μὲν ἐκ πέντε δήμων ὑπ' Ἀργείων συνωκίσθη, Τεγέα δ' ἐξ ἑννέα ..."

<sup>54</sup> K. Beloch, *Griechische Geschichte* I, 1, p. 335, n. 4.

<sup>55</sup> *RE* IV<sup>a</sup>, 1436.

<sup>56</sup> *Oxford Classical Dictionary*, s.v. *Mantineia*. Dunbabin was here following Busolt, *Gesch.* III, 1, p. 119, n. 2.

<sup>57</sup> Busolt, *Gesch.* III, 1, p. 118. A later date is suggested in Busolt, *Staats*, 1396.

<sup>58</sup> A. Andrewes, "Sparta and Arcadia in the early Fifth Century," *Phoenix* 1952, 1 ff.

<sup>59</sup> *Geschichte des Altertums* II, 516; also H. v. Gaertringen, *IG* V, 2, p. 47, 1. 105.

<sup>60</sup> *RE* V, 109; *IG* V, 2, p. 2, 1. 129 (478-3). For an earlier date cf. Busolt, *Gesch.* I, 2, p. 702, n. 4.

it as any other date has, for Sparta was then occupied by post-Plataean operations against the Persians and beset by the humiliation of her withdrawal from the leadership, while Leotychides' flight to Tegea suggests that the Tegeans were hostile to Sparta at this very time.<sup>61</sup> There seems also to have been some common ground between Mantinea and Argos, under whose auspices Mantinea's *synoikismos* took place, for Mantinea's forces arrived late for the battle of Plataea,<sup>62</sup> and Argos kept aloof from all operations against the Persians. If the *synoikismos* of Mantinea and that of Tegea are set in the early seventies, they can be brought into relation with the opening up of the two new federal mints of the Arkadikon coinage, 2 at Tegea, 3 at Mantinea. *Synoikismos* in the two leading Arcadian states could not be achieved without the expenditure of sums of money, and the inauguration of a new federal mint in each of the newly organised states seems a proper and likely proceeding.<sup>63</sup>

The fact that the 3rd mint continued to strike the Arkadikon coinage when the other two mints has stopped in ca. 460 also fits the allocation of that mint to Mantinea, for in the sixties Mantinea was not out of favour with Sparta, had assisted her in the Messenian Revolt, and had not fought alongside the other Arcadians at Dipaea.<sup>64</sup> If loyal Mantinea wished to continue striking the Arkadikon coinage, Sparta would not be expected to object. The cessation of the mints 1 and 2 may well have been voluntary because there was no need for three mints in view of the reduced demand; but Sparta after the suppression of the Messenian Revolt could have opposed the striking of the federal coins in mints which were operated by Arcadians who had been disloyal.

The coinage continued in this 3rd mint on a reduced scale until, on the stylistic evidence, soon after 420, and this date has been turned into the more precise 418 to fit the natural presumption that the cessation was due in some way to the battle of Mantinea in that year. In the course of the final phase of the coinage (Period V) the Mantineans had allied themselves to Sparta's enemies, and if Mantinea

<sup>61</sup> Hdt. VI. 72. 2.

<sup>62</sup> Hdt. IX. 77.

<sup>63</sup> See also the discussion in connection with the *synoikismoi* of Mantinea and Tegea on pp. 16ff.

<sup>64</sup> Xenophon, *Hellenica* V. 23; Hdt. IX. 35. 2.

was the home of this 3rd mint, on her defeat by Sparta the suppression of the federal coinage would follow as a matter of course.

Although a Mantinea home for the 3rd mint fits the pattern well, it might be argued that because Mantinea struck coins of her own (with the bear type), she would not likely have struck the federal coins.<sup>65</sup> This Mantinean coinage proper has not been studied in detail with reference to its die-links and its continuity, but there does seem to have been a distinct gap in it. The British Museum collection is representative of the coinage as a whole, and Gardner (*BMC*) divided its coins into two groups—those coins struck before 471, and those struck after 431. This gap coincides rather closely with the period of the striking of the Arkadikon coinage in the 3rd mint. It may well be that Mantinea struck her own rare coins with the bear type until ca. 477 when the 3rd Arkadikon mint opened under her authority, and then resumed her own specific coinage in the last quarter of the century when the mint closed. The difference in style of the letter forms alone on her bear coinage, between *BMC* pl. 34, 18–22 on the one hand and 24ff. on the other, is very marked and confirms Gardner's belief that the Mantinean coinage proper was not continuous.<sup>66</sup>

The case for the allocation of the three mints may be stronger for Tegea and Mantinea than for Cleitor, but the evidence to date warrants the use, through the rest of the work, of the attributions as allocated above; the Cleitor mint, the Tegea mint, and the Mantinea mint.

#### HISTORICAL ASPECTS

The Tegea mint and the Mantinea mint then open about the same time that the Cleitor mint begins issuing the wreathed heads.<sup>67</sup> After a short period of issuing coins in brisk but not exceptional activity (represented by the first section of each mint) there follows in each mint a period of intense activity marked by a complex crossing of

<sup>65</sup> Wallace, "Kleomenes," 34.

<sup>66</sup> What might have been an interesting confirmation of the allocation of the 3rd mint to Mantinea (and may yet prove to have a bearing) may be seen on 284 at the end of Period II. See p. 86, n. 10.

<sup>67</sup> The evidence for the contemporaneity of the coins of the three mints at this period is detailed on pp. 41 f. and 45 f.

dies, use of dies long after the appearance of flaws, a reduction of weight in the Tegea and Mantinea mints, and an experiment with fixed dies in the Mantinea mint. To fix the date of the second section exactly to a year may not be possible, but if the first section began ca. 477, a date between 475 and 473 could be given to the beginning of section 2. There are two problems—why should the Arcadians find it necessary to open the two additional mints, and what was the cause of the increased mint activity as represented by section 2 of each mint? The increase in the number of mints seems a deliberate action; the increase in mint activity in section 2 seems to reflect hurry and crisis; in fact these issues of section 2 may well represent payments to finance a military campaign.<sup>68</sup>

There is no definitely dated battle in this period involving Arcadians, but there is a passing reference by Herodotus (IX, 35, 2) to five victories of the Spartans won while Teisamenos was their seer; Plataea, Tegea against the Tegeans and the Argives, Dipaea against all the Arcadians except the Mantineans, Ithome (mss. Isthmus) and Tanagra. As Plataea, Ithome, and Tanagra are in correct chronological order, it is assumed that Tegea and Dipaea are as well, but there has been little evidence for dating either. Some authorities have placed both battles in the seventies, others have preferred the sixties, while others have placed Tegea in the seventies and Dipaea in the sixties.<sup>69</sup> It is not unreasonable then to associate Tegea, the first of these battles, with the period of increased activity in the three mints, the beginning of which has been dated 475/3, while the fact that the increased activity occurs in all three mints suggests a united Arcadian front at this time.

To account for the opening up of the additional federal mints at Tegea and Mantinea, it might have been safest simply to assume an increasing demand for the coinage; but it has been suggested above that the *synoikismoi* of Mantinea and Tegea might be dated to ca. 477 and be the immediate cause for the opening up of the new

<sup>68</sup> See J. M. F. May, *Ainos, Its History and Coinage*, 91 for the minting of small denominations to pay troops; see also Thucydides V. 47. 6 for the payment of troops at an Aeginetan half-drachma per day.

<sup>69</sup> Seventies: Busolt, *Gesch.* III, i, pp. 120–3; Walker, *CAH* V, 65. Sixties: Andrewes, *Phoenix* 1952, 1–5; Callmer, *Studien zur Geschichte Arkadiens*, 84; Forrest, *CQ*, 229. One battle in each decade: Hammond, *Historia*, 371.

mints. The theory, admittedly, is based on conjecture but the *synoikismoi* might also give a cause for the battle of Tegea. For it has been plausibly suggested<sup>70</sup> that a *synoikismos* involved a change to a democratic form of government, in which case Sparta might well be expected to object, and when her protests were ignored, to send an army to demand satisfaction. In order to finance their campaign the Arcadians had hurriedly to increase the output of their federal mints, the results of which are seen in the second section of each mint. The Spartan army was directed on Tegea, where *synoikismos* had taken place, and the Tegeans were supported by the Argives, under whose auspices the *synoikismos* of Mantinea, and perhaps of Tegea as well (cf. p. 13) had been carried through. But although the campaign resulted in a victory for the Spartans, the victory was not decisive enough to annul the *synoikismoi*; at least, a democratic form of government was in power in Tegea not long after, and in Mantinea in ca. 421,<sup>71</sup> the coinage of the three mints continued, and the Arcadians except the Mantineans were still resisting the Spartans in the following decade. Perhaps Simonides' fragment 122 (Diehl) reflects Tegea's position after the battle, the city was saved but at the cost of a defeat:

τῶνδε δι' ἀνθρώπων (Arcadians and Argives) ἀρετὰν οὐχ ἵκετο καπνὸς  
αἰθέρα δαιομένης εὐρυχόρου Τεγέας,  
οἱ βούλονται πόλιν μὲν (surely the city after its *synoikismos*?) ἐλευθερίᾳ  
τεθαλυῖαν  
παισὶ λιπεῖν, αὐτοὶ δ' ἐν προμάχοισι θανεῖν.

An obvious objection to the reconstruction is that there is too long a gap between the crime and the punishment: if the *synoikismoi* took place in ca. 477, why did the Spartans wait until the second half of the seventies before reacting? The date of section 2 and Tegea might be as early as 475, in which case the gap is not remarkable, but it is possible that the change from oligarchy to democracy was not immediate after the *synoikismos*, and a certain dilatoriness on the part of Sparta after her humiliations in the early seventies is not

<sup>70</sup> Andrewes, *Phoenix* 1952, p. 2. For the existence of a democratic form of government at Argos between 494 and 470, see Forrest, *CQ*, p. 226.

<sup>71</sup> Polyaeus II. 10. 3; Thuc. V. 29. 1.

unexpected. Part of this reconstruction is conjecture, but the opening up of two additional mints ca. 477, and the increased mint activity of not later than ca. 473 are facts which must be taken into account in the history of the period. A dating of the *synoikismoi* to the early seventies gives an occasion for the former and also a possible motive for the Spartan invasion of Arcadia;<sup>72</sup> and Tegea, the first undated battle between 478 and 460 involving Arcadians, might well be connected with the latter.

A date of ca. 468 has been given to the beginning of Period III, and as there seems to be no interruption in the coinage between Periods II and III, ca. 468 has been adopted as the terminus of Period II.

#### CHARACTER OF THE COINAGE

Already at this stage a conclusion may be reached as to the character of the Arkadikon coinage. The period when the three mints were operating covers the two decades ca. 477–460, the period of the battles of Tegea and Dipaea and the Arcadian resistance to the Spartan hegemony.<sup>73</sup> If the coinage had been religious in character, it would have been impossible to explain why two more mints in different parts of Arcadia were needed and why there should be a great increase in the volume of the coinage at this particular time, but if it is political in character, the increase in mints and coinage is what might be expected in view of the expense involved in the mobilisation of the Arcadian forces. The coinage consists largely of half-drachmas of Aeginetan weight, and that this was the soldier's daily allowance in the 5th century B.C. is proved by the terms of the treaty between Athenians, Argives, Mantineans and Eleans in 420, in which it was stipulated that the soldiers of one state going to the help of another should receive an Aeginetan half-drachma a day for supplies.<sup>74</sup> It may be assumed that the allies had these Arkadikon half-drachmas in mind, because the smaller denominations of Elis-

<sup>72</sup> The *synoikismos* as a cause of the battle of Tegea has been independently suggested by Hiller v. Gaertringen, *IG V*, 2, p. 2, 1. 159.

<sup>73</sup> Hdt. IX. 35.

<sup>74</sup> Thuc. V. 47. 6.

Olympia, Aegina, and Corinth are comparatively rare, and the Arkadikon coinage met a real need for small silver in the Peloponnese.<sup>75</sup>

### PERIOD III. ca. 468—ca. 460 B.C.

The sixties of the 5th century in Peloponnesian history in general abound in controversies. For the Arcadians in particular there is the problem of the dating of the battle of Dipaea in which all the Arcadians except the Mantineans took part against the Spartans, and of the siege of Mycenae in which the Argives were assisted by the Tegeans among others. The two main reasons for setting Dipaea in this decade are: (1) the reference by Isocrates<sup>76</sup> to this Spartan victory of a single line against many myriads, for if the Spartans were outnumbered, an occasion after the earthquake and the beginning of the Messenian Revolt seems most likely; (2) the fact that the Mantineans were absent from the battle, and are known to have supported Sparta during the Messenian Revolt.<sup>77</sup> The Mycenaean campaign is usually set in this decade because Diodorus<sup>78</sup> states that the Argives and Tegeans waited until they saw the Spartans involved in their own difficulties before they began the siege and that the Mycenaeans, when besieged, were not assisted by the Spartans because the latter were detained by the earthquakes and their own wars; and Diodorus does in fact date the siege to 468/7. Both these events, then, if Diodorus is right about the reasons for Spartan inability to help and if the right inference has been made from Isocrates, should come after the beginning of the Messenian Revolt. This leads to the vexed question—when did the Messenian Revolt begin?

The evidence and the theories in connection with the Revolt are well surveyed by Gomme,<sup>79</sup> who himself believed that it began in

<sup>75</sup> The conclusion on the political character of the coinage must affect the interpretation of the ethnic. To say that it stood for σῆμα (or the like) Ἀρκαδικῶν ἀγώνων runs against the present evidence. It is simplest to take it as neuter nominative Ἀρκαδικὸν νόμισμα (cf. Φενικόν, Δαλφικόν).

<sup>76</sup> Archidamus 99.

<sup>77</sup> Hdt. IX. 35. 2; Xen., *Hell.* V. 2. 3.

<sup>78</sup> XI. 65. 3-4.

<sup>79</sup> A. W. Gomme, *Commentary on Thucydides I*, 401.



ca. 465. Of later authorities Andrewes<sup>80</sup> accepts the same date and places the siege of Mycenae and the battle of Dipaea in 465/4. Hammond<sup>81</sup> takes the orthodox dates for the Revolt, 469/8–460/59, accepts Diodorus' date of 468 for the siege of Mycenae and places the battle of Dipaea in ca. 466. His reason for placing Dipaea in the first half of the Revolt is that after 464 (for him the date of the great earthquake and the extension of the Revolt) Sparta called upon her allies on two occasions, which he dates to 464 and 462, to assist her: at Dipaea she was alone; therefore, Dipaea must have occurred before her appeals (but see below p. 25). Sealey<sup>82</sup> also takes the orthodox dates, but against Hammond (*inter alia*) believes in a single earthquake at the beginning of the Revolt: he accepts the two appeals made by Sparta, but dates them to 468/7 and 462.<sup>83</sup>

The problem, as far as it affects Arcadian history, may be simplified as follows:—if the Revolt began 469/8, then Diodorus may be right in his date of 468 for the siege of Mycenae, and Dipaea will come later in the decade; but if the beginning of the Revolt is dated 465, the Mycenaean campaign should follow in ca. 465/4 and Dipaea not long after—it must be a relatively short interval in order to allow Sparta time to return south after the battle, and then after appealing to her allies for the second time (462?) complete the final protracted campaign at Ithome by the end of the decade; for Dipaea should precede Teisamenos' fourth victory for the Spartans—that at Ithome over the Messenians.<sup>84</sup>

#### EVIDENCE OF ARKADIKON COINAGE FOR DATE OF MYCENAEAN SIEGE

If the Arkadikon coinage is examined for any light it can throw on the date of the Mycenaean campaign and the battle of Dipaea, it

<sup>80</sup> Andrewes, *Phoenix* 1952, 1.

<sup>81</sup> Hammond, *Historia*, 371.

<sup>82</sup> R. Sealey, "The Great Earthquake in Lacedaemon," *Historia* VI, 3 (1957), 368.

<sup>83</sup> Forrest, *CQ*, p. 231, n. 4, seems half converted by Hammond's defense of the long period for the Revolt.

<sup>84</sup> The ms. reading in Hdt. IX. 35. 2 for the fourth contest is ὁ Μεσσηνίων ὁ πρὸς Ἴσθμῳ or τῷ Ἴσθμῳ. The emendation Ἰθώμη is widely, if not universally accepted. However, if Ἴσθμῳ should be correct, it most likely refers to an engagement in the final phase of the Revolt which put the Messenians into an impossible position.

will be seen that in the Tegea mint there occurs near the beginning of the first section of Period III an obverse die, O. 121 (PLATE VIII) which shows a change in the position of Zeus and in his attributes. He is shown standing with a *phiale* or libation bowl in his left hand and the eagle at his right. It has already been suggested (p. 11) that this represents Zeus Meilichios (for the *phiale* is his symbol), and was used as evidence to show that the mint was Tegea, where alone in Arcadia the worship of Zeus Meilichios is known. However, since Zeus Meilichios was worshipped at Argos also,<sup>85</sup> this coin might well reflect the co-operation between the Argives and the Tegeans in the Mycenaean campaign. A dating, therefore, for the beginning of this section becomes important for the dating of the campaign. Three items in the section provide a date and the conclusion in each case is the early sixties of the 5th century. The examination is as follows:

1. *The standing Zeus*, O. 121, with his weight on his right leg and his left relaxed illustrates a development which is introduced into sculpture right at the end of the archaic period, but it represents an early stage in this development, for the shoulders are still quite straight and the right shoulder does not drop with the tense right leg, while the combination of the frontal chest and profile legs is harsh. If it is compared with the standing figure on the reverse of the Selinuntine tetradrachms, it will seem to be not later than those dies which Dr. Schwabacher has dated to ca. 467;<sup>86</sup> and yet it is clearly more competent and advanced than the striding Zeus on the Elis-Olympian didrachm inscribed ΟΛΥΝΠΙΚΟΝ, which Seltman dates to ca. 470.<sup>87</sup>

2. *The threequarter heads* of the goddess on some of the reverses of the Arkadikon coinage have already been dated by Jacobstahl<sup>88</sup> to the sixties of the 5th century and these have been allocated to Period III of the Tegea mint, of which the earliest occur in the section in which Zeus Meilichios appears, and the latest, with about 30 dies in between, in the final section of the mint, which ceases to

<sup>85</sup> See n. 42.

<sup>86</sup> W. Schwabacher, "Die Tetradrachmenprägung von Selinunt," *Mitteilungen Bayerischen Numismatischen Gesellschaft* 83 (1925), p. 5.

<sup>87</sup> Seltman, *Olympia*, p. 13, pl. II; Seltman, *Greek Coins*, pl. 15, 4.

<sup>88</sup> P. Jacobstahl, *Die Melischen Reliefs* (1931), p. 146.

operate ca. 460. It is logical to assume that, if Jacobstahl is right, the earliest threequarter heads must belong to the first half of the sixties.

3. *The profile head*, R. 108 (PLATE VIII) may more easily be compared with both (a) coins and (b) vases: (a) First its relation to the Demareteion:<sup>89</sup> R. 108 is clearly later, for the hair is less formalised, and an attempt has been made at profiling the eye, whereas the Demareteion's is still frontal, but it will not be considerably later, because the profiling is still at an early stage with the eye long and narrow, and the upper lid extending farther than the lower, and, most important, the engraver who copied this die in R. 109 still kept to a frontal eye.

In the coinage of Ainos the obverses of J. M. F. May's<sup>90</sup> earliest issues are earlier than R. 108, and it is not until his dies A. 7-9 are reached that there is a clear similarity with R. 108, where there is approximately the same stage of development of the eye: the shape and proportions of the head and features in A. 8 are particularly close to those of R. 108. His dies A. 7-9 are dated to the early sixties.

(b) A comparison with Attic vase-painting shows that the second quarter of the 5th century is the right period for the coin. In order to narrow the bracket, in relation to the work of the Early Classical artist, the Niobid Painter, (who worked in the decades 470-50), R. 108 comes nearest to the works of his early period, e.g., to the heads of the Leningrad fragments<sup>91</sup> with their more angular fastidious style rather than to the broader, freer drawing of his middle period. In relation to the Pistoxenos Painter, who worked about 475-460, R. 108 is definitely later than his early works such as the Schwerin skyphos, on which the frontal eye is still employed on a profile face, close to his fragmentary cup in Taranto, and earlier than the painter's later work such as the London Aphrodite cup.<sup>92</sup>

<sup>89</sup> W. Schwabacher, *Das Demareteion*.

<sup>90</sup> *Ainos, Its History and Coinage*. A. 8 is best studied in the Lockett specimen. A date of the early sixties is confirmed by the Arethusa heads of Syracuse; closest comparisons for R. 108 come from the heads of Peloponnesian style in Boehringer's *Ketos* Group, Series XIV.

<sup>91</sup> Beazley, *ARV* 599/3, 605/64; see T. B. L. Webster, *Der Niobiden-Maler*, pl. 9a-b.

<sup>92</sup> Skyphos: Beazley, *ARV* 862/30; see Arias and Hirmer, 166. Taranto Cup: Beazley, *ARV* 860/3; see Arias and Hirmer, 167. BM Cup: Beazley, *ARV* 862/22; see M. Robertson, *Greek Painting*, 113.

The above evidence from coins and vases cannot prove a precise date for R. 108 and the other coins of section 1, but it does suggest that a date in the sixties is certainly right and that a date in the early sixties most likely, especially when it is remembered that the engraver of R. 109, who copied the die R. 108, cut a frontal eye for his goddess.

#### EVIDENCE OF ARKADIKON COINAGE FOR THE DATE OF DIPAEA

After sections 1 and 2 in the Tegea mint, which show an ordinary degree of mint activity (9 obverse, 10 reverse dies in 13 die combinations with 24 specimens), there follows a section in which there is a distinct change of tempo (3 obverse, 7 reverse dies in 11 die combinations with 22 specimens). If a similar activity can be observed in the other mints, it may be concluded that there was a sudden crisis in Arcadian affairs which demanded an increase in the output of the coinage. In the Cleitor mint the first two sections, which are contemporary with the first two sections of the Tegea mint, have a combined aggregate of 13 obverse, 13 reverse dies in 20 die combinations with 41 specimens, but the third section shows a much greater complexity of die-linkage (4 obverse, 5 reverse dies in 9 die combinations with 17 specimens), an activity which is comparable with that in the Tegea mint. In the Mantinea mint the first section has few die combinations to the number of dies (7 obverse, 3 reverse dies in 6 die combinations with 8 specimens), but this is followed by a section containing 4 obverse, 8 reverse dies in 12 die combinations with 38 specimens, so that in the Mantinea mint too the increased activity ensues after a period of normal activity.<sup>93</sup>

The only recorded crisis in Arcadian affairs which could be dated to the sixties (since Tegea has been allotted to ca. 475/3) was the battle of Dipaea, in which all the Arcadians except the Mantineans took part. It is therefore probable that this increased activity in all three mints reflects the battle of Dipaea. Now as Dipaea should come before 460, it follows that if the theory is correct, section 3 in the Cleitor and Tegea mints and section 2 in the Mantinea mint will have

\* But in the Mantinea mint the greater activity may fall a little sooner, cf pp. 25 f.

to belong to the sixties as well as section 1 of the Tegea mint (which was dated to the early sixties), and this dating of the latter sections is fully confirmed by a stylistic examination of the dies, for section 3 in the Cleitor mint, and section 2 in the Mantinea mint could not be dated later than the sixties, and, as it has been stated above, the threequarter heads of Tegea have been independently dated by Jacobstahl to the sixties.

Next to be considered is that part of the sixties to which the Dipaea sections belong. Clearly, in order to fit the two dozen odd dies each from the Cleitor mint and the Tegea mint, the Dipaea sections should belong to the latter part of the sixties, in fact to accommodate the numismatic evidence there should be as much time as possible in the sixties between the siege of Mycenae section and the Dipaea sections as the historical evidence will allow. If the siege of Mycenae is given Diodorus' date of 468, Dipaea should be dated to 463 or to 462.

#### DATE OF THE MESSENIAN REVOLT

For those who accept that the Mycenaean siege begins after the Messenian Revolt the Arkadikon coinage provides evidence to suggest that the Revolt began in 469 and not in 465; for if the Revolt had begun in 465, to be followed by the Mycenaean siege, which is reflected in Section 1 with its Zeus Meilichios die, it would have been impossible to condense all the coinage into a matter of two or three years. There is room for the coinage only if the Revolt is given its ten years as the literary evidence of Thucydides and the general tradition demand. This conclusion admittedly depends upon the correlation of the Zeus Meilichios die with Argos and the Mycenaean siege, but this is the only occasion in the whole of the series that the Zeus is changed in his position and attributes, so that it warrants the credit of some special significance.

#### A CAUSE FOR THE BATTLE OF DIPAEA

Most authorities, through lack of evidence, have avoided conjecturing an incident which might have provoked the battle of Dipaea. It is unlikely that the provocation goes back to the previous decade and the battle of Tegea, for Sparta would hardly have waited until

she could only put one line into the field (with some allowances for Isocrates rhetorical exaggeration) before taking punitive measures on the Arcadians. It is therefore unlikely that anything like a state of war existed between the Arcadians and the Spartans between the two battles; the Arcadians must have given the Spartans a fresh ground for complaint. It is possible that when the Spartans in their need during the Revolt appealed to their allies for help, the Arcadians, with the exception of the Mantineans, refused. As soon as the Messenian front was stabilised, the Spartans would immediately march into Arcadia to demand satisfaction. Hammond's contention that Dipaea must have taken place before the appeals for help, because she was not accompanied by her allies in the battle, does not seem to be sound. The allies, the Athenians included, had been called in because Sparta was in sore distress at home; the allies could not be expected to follow Sparta on a punitive expedition into Arcadia. If the rejection of the appeal was the cause of the battle, which of the appeals for help did the Arcadians reject, if it is assumed that Plutarch is right in distinguishing two appeals (Cim. 16, 8) and that the Arcadians were subject to the same appeals that were made to the Athenians? The Dipaea expedition could not have taken place after the second appeal because by then Ithome was reduced, and Dipaea should precede this. It must then be after the first appeal; Hammond's date for this is 464, whereas Sealey prefers 468/7. Sealey's objection to the date of 464 on the grounds that Cimon, the leader of the Athenian help, was in the area of Thasos seems to have some weight; but there is no evidence that Cimon was present throughout the siege of Thasos; in fact, it seems unlikely that the commander-in-chief would remain on the spot for two years. If the rejection by the Arcadians of the first Spartan appeal was the cause of the battle, this first appeal would be expected to come not long before the battle of Dipaea, which has been set at 463/2.

If the above reconstruction of the cause of the battle of Dipaea is sound, it may explain a slight difference of timing between the increased activity of the Cleitor and Tegea mints on the one hand and that of Mantinea on the other. In the former the increased activity appears in section 3 after about a dozen obverse and a dozen reverse dies belonging to sections 1 and 2, but in the Mantinea mint the

increased activity occurs in section 2 after a smaller number of dies, so that it seems to fall earlier. This earlier occurrence at Mantinea is to be expected in view of the fact that Mantinea did not reject the Spartan appeal for help, and would therefore need to increase her output of money in order to finance her expedition before the other mints, which, having refused to send help, would not need to increase their output until later when the Spartans had stabilised the situation which led to their appeal and were threatening to march into Arcadia to demand satisfaction.

#### CLOSURE OF THE CLEITOR AND TEGEA MINTS

In the Cleitor and Tegea mints there are a few more dies that have been placed later than the Dipaea section, which probably take the coinage down to ca. 460 or a little later when these two mints close down. After the Messenian Revolt had been put down, Sparta was better able to exert her authority, and only Mantinea, which had remained loyal, continued striking the Arkadikon Coinage.

#### PERIOD IV. ca. 462/o-ca. 428 B.C.

##### CHRONOLOGY

That it was the Mantinea mint which continued striking the Arkadikon coinage is substantiated both by die-links and by style (cf. p. 57), but the issues show a marked reduction when they are compared with those between ca. 477 and ca. 460.

The date of the end of Period III has been given to the beginning of Period IV, since no break can be detected in the coinage, but since it is suspected that a few of the issues attributed to Period IV were struck in the Mantinea mint before the end of Period III (i.e., while the other mints might have been striking the coins which have been allocated to Period III, section 4), the beginning of Period IV has been put tentatively at 462/o.

The dating of the individual sections of Period IV depends upon stylistic criteria. In an article<sup>94</sup> on Corinthian coins in Copenhagen Dr. W. Schwabacher drew attention to the close resemblance be-

<sup>94</sup> "Corinthian Contributions from Copenhagen," *Acta Archaeologica* 1941, 53.

tween the head on a Corinthian drachma (PLATE XIV, h), and certain heads on Arkadikon half-drachmas; in particular he referred to the coin in the British Museum, which is our R. 186 (PLATE XII) of section 5; but this latter coin is a copy of the much finer, R. 185,<sup>95</sup> and though I would agree with his view (see n. 22) that R. 186 is not of the same artistic quality as the Corinthian coin, R. 185 is by no means inferior. He rightly rejects Ravel's date of ca. 430 for the Corinthian staters which correspond to the above mentioned drachma of Corinth and relating them to the style of Myron he gives them a date of ca. 440. This must be approximately the date of the beginning of section 5, which has R. 185 early in the first sequence of that section.

There is another outstanding half-drachma later in the same section, 189 (PLATE XII), the reverse of which must be considered superior even to R. 185. It seems vividly to reflect and have something of the breadth and nobility of the Bologna head, which has been attributed as a copy of Pheidias' Lemnian Athena (PLATE XIV, k-n).<sup>96</sup> The original has been dated to the forties of the 5th century, and this accords well with a date of the thirties (late) for the coin. The remainder of the dies of section 5 may extend to ca. 428, the date of the beginning of Period V.

Section 4 of Period IV cannot be far separated in time from section 5, for the style of the first reverse, R. 180, is very close to that of the first reverse of section 5, while the corresponding obverses are just as close. If section 5 began ca. 440, a date of ca. 450/445-440 seems reasonable for section 4 and this bracket may further be reduced to ca. 446-440 in order to accommodate the historical evidence discussed below.

Thus sections 1-3 are left with the bracket 462/0-446, which fits well with the style of the "classical" dies and does not preclude the inclusion of the more provincial dies which are much harder to date closely.

<sup>95</sup> To which Dr. Schwabacher may refer in his reference to Babelon, pl. 223, 33-6, but there the die is coarsened.

<sup>96</sup> Richter, *Sculpture*, fig. 614; see C. Picard, *Manuel d'Archéologie Grecque, La Sculpture, Periode Classique*, 333, fig. 143 for the profile view (= PLATE XIV, b). The theory that the Dresden and Bologna statues are copies of the Lemnian Athena is not fully proven.



## HISTORICAL ASPECTS

The final victory which was gained by the Spartans while Teisamenos was their seer was Tanagra, probably fought in 457. This was the main campaign in the period ca. 460–446 in which Arcadians might have taken part. The allies of the Spartans at Tanagra are not specified by name either by Thucydides<sup>97</sup> or on the inscription at Olympia<sup>98</sup> commemorating the battle, but a general levy of the Lacedaemonian League is usually assumed.<sup>99</sup> The Arkadikon coinage may provide evidence on this point. In the first section there are two die combinations, 250–1, which are remarkable both for the relatively large number of coins surviving from them and for the gross flaws which exist on most specimens; they are not die-linked, but the reverses certainly belong together. In 250 the obverse continues in use even though the torso of Zeus is reduced to a mere skeleton. In 251, of the six surviving examples, five have the greater part of the goddess' hair, including the whole of the queue, covered by a flaw. The die R. 155 is also allowed to get into a deplorable state before being discarded. To allow dies, particularly obverse dies, to continue in use long after the appearance of flaws was not a usual feature of the Arkadikon mint except when working under stress, and their appearance here might well have been caused by such extenuating circumstances as the exigencies of the Tanagra campaign, but as the other mints have closed down there is no way of cross-checking as there was in Periods II and III, so that this conjecture should be regarded only as a possibility.

Of the recorded events of the history of the rest of the Period, ca. 446–ca. 428 (sections 4–5), in which the Arcadians were likely to have been implicated, the first is the invasion of Attica by Pleistanax and the Spartan alliance,<sup>100</sup> for which the upper end of the bracket of section 4 was adjusted. It is possible that the early issues of section 4 with the increased crossing of dies (3 obverse, 3 reverse dies in 6 die combinations) reflect the Peloponnesian invasion.

<sup>97</sup> Thuc. I, 107. 2.

<sup>98</sup> M. N. Tod, *Greek Historical Inscriptions*, 27.

<sup>99</sup> A. W. Gomme, *Commentary I*, 313.

<sup>100</sup> Thuc. I. 114. 1–2.

The Thirty Years Truce followed the invasion, and although the Spartan alliance contemplated intervening in the Samian siege of 440-39,<sup>101</sup> no action was taken,<sup>102</sup> and the Period continued to be one of peace for the Arcadians.

#### PERIOD V. ca. 428-ca. 418 B.C.

##### CHRONOLOGY AND STYLE

In this final Period, a short but interesting one, there is an unusually close resemblance between two of the Arkadikon heads, R. 202 and R. 205, and the head of the *Nike* on the Terina didrachm inscribed with the letter Φ, and attributed to the engraver Phrygillos (PLATE XIV, o-q).<sup>103</sup> On the Terina didrachm and the two Arkadikon half-drachmas the hair flows in waves from the top of the head, forward down to the *ampyx* in three degrees, and backward to the roll in two degrees. All three have the hair in a roll of similar shape with the back contour line waved; Terina and R. 202 have fine hairs on the nape of the neck. On all, the eye, nose, and mouth have the same delicate sensitive shapes. That R. 202 and R. 205 have no pupil, whereas Terina has, may be accounted for by the difference in scale; and the same reason may account for the omission of decoration on the *ampyx* of R. 205 (the hair of R. 202 at this point above the brow is taken back in waves underneath the roll). The truncation is firmly marked by a rim, slightly concave, and oblique. Had the Arkadikon heads occurred on smaller denominations in the Terina series, they would undoubtedly have been attributed to the hand of Φ. If Φ and Phrygillos were one and the same then he travelled widely; Seltman thought he was an Athenian whose hand he could see at work perhaps at Sinope on the Black Sea,<sup>104</sup> but Arcadia is much nearer home and one cannot expect to see three heads much closer in style than the Terinaean and the two Arcadian.

<sup>101</sup> Thuc. I. 40. 5.

<sup>102</sup> No explanation is here offered for the increased activity at the beginning of section 5.

<sup>103</sup> K. Regling, *Terina*, pl. I, S; but the BM specimen is best for study (cf. Seltman, *Masterpieces*, p. 67, fig. 27a).

<sup>104</sup> Op. cit., p. 17.

The resemblance to the Terina coin does not stop at the head. The seated *Nike* on the Terina reverse (Regling  $\gamma\gamma$ ) coupled with the Phrygillian head and usually attributed to Phrygillos as well shows a marked drawing back of the legs below the knees. O. 208, with which R. 205 is coupled (PLATE XIII, 309), shows a similar marked drawing back of one leg, and Zeus has the same slender thighs which are a feature of the *Nike*. On O. 208 the triangular corner of the *himation* crossing the thighs is abandoned and replaced by two small curved folds on the far thigh, an arrangement which closely resembles that on the seated *Nike*.

Regling dates the Terina dies in question to ca. 425–420, and this must be the approximate bracket of Period V with a slight extension of a few years at either end to cover the earlier and later die combinations on either side of the two reverses in the distinctive Phrygillian style (ca. 428–ca. 418).

On the Arkadikon obverses a distinct change can be seen in the wings and tails of the eagles; the forward edge of the wing is rounded, and the tail too is more circular. Seltman has already compared the eagle on O. 208 with that on the Elean reverse die  $\beta\tau$ ,<sup>105</sup> saying that the Arcadian imitates the Elean, but this particular style of eagle is rare at Olympia,<sup>106</sup> and on the Arcadian is confined to Period V, and as both are very uneagle-like, it is far more likely, if there is imitation, that both are being influenced by a third coinage. On both the one Elean and on the Arcadian coins of the Period the eagles look like doves. It was about this time that Sicyon<sup>107</sup> began issuing her didrachms with the chimaera and dove types. The doves bear a striking resemblance to the Arcadian eagles, and it is possible that the appearance in the Peloponnese of these didrachms with the dove type made itself felt on the Arcadian eagles.

#### HISTORICAL ASPECTS

Period V was one of considerable activity for the Arcadians. Apart from the Peloponnesian invasions of Attica, Mantineans saw service

<sup>105</sup> Seltman, *Olympia*, pp. 35–6.

<sup>106</sup> I can see nothing similar in the plates of Seltman.

<sup>107</sup> Seltman, *Greek Coins*, 163 dates to ca. 420; Babelon, *Traité III*, 523 dates to 431; Head, *Historia Numorum*, 409 dates to ca. 400 or earlier.

on the Acarnanian front in 426/5<sup>108</sup> and must have been loyal to Sparta at least to this time. Nearer home, before the winter of 423/2 the Mantineans had expanded westward at the expense of the Parrhasians, and had established and garrisoned a fort at Cypsela;<sup>109</sup> this was on the Laconian border and a threat to Tegea. In the same winter, during the period of the truce, the Mantineans and the Tegeans turned against each other and fought a battle at Laodoeion<sup>110</sup> in the district of Oresthis. The allies of both sides took part: the allies of the Mantineans were presumably the Parrhasians, and of the Tegeans perhaps the Heraeans and the Maenaliens.<sup>111</sup> The action was indecisive, both sides claiming the victory. After the peace of Nicias in 421 Mantinea joined the Argive alliance,<sup>112</sup> but Tegea remained loyal to Sparta. In the same year the Spartans answered the call of certain Parrhasians and made an expedition into their territory, gave the Parrhasians their independence and pulled down the fort of Cypsela; but the Mantineans withdrew apparently without suffering any disaster.<sup>113</sup> In the following year the Athenians joined the alliance of the Argives, Mantineans and Eleans, and in the treaty<sup>114</sup> it was stipulated that the infantry should receive a half-drachma of Aeginetan weight a day for supplies when in the field, and the trooper, one drachma. There followed a period of indecision on the part of Sparta until she was at last forced to take the field in company with the Tegeans and all the rest of the Arcadians who were allies of the Spartans; the rest of the allies mustered at Phlius.<sup>115</sup> But when Agis made terms with the Argives, the allied force dispersed. Later, on the arrival of an Athenian force, the Mantineans and the Eleans persuaded the Argives to break the truce and attack Orchomenos because hostages had been deposited there by the Spartans. Orchomenos capitulated and gave up the hostages. The next victim was to be Tegea. When Tegea threatened to surrender to the Mantinean and allied forces, Sparta again took the field and apart from the Tegeans themselves, had the assistance of other Arcadians, the Heraeans and the Maenaliens, who joined her at Tegea. On the Mantinean side

<sup>108</sup> Thuc. III. 107ff.

<sup>110</sup> Thuc. IV. 134.

<sup>112</sup> Thuc. V. 29.

<sup>114</sup> Thuc. V. 47. 6.

<sup>109</sup> Thuc. V. 33.

<sup>111</sup> Cf. Thuc. V. 33. 1 and 67. 1.

<sup>113</sup> Thuc. V. 33.

<sup>115</sup> Thuc. V. 57.

apart from the Argives and the Athenians there were other Arcadians and also Cleonaeans and Ornates.<sup>116</sup> The Spartans and their allies advanced on Mantinea and as a result of the Spartan victory near the city (418) the Mantineans were compelled, when the Argives had come to terms with the Spartans, to make an agreement themselves and to abandon their domination over other cities.<sup>117</sup>

#### CLOSURE OF THE MANTINEA MINT

On the evidence of the style of the final reverses it has been suggested that the Arkadikon coinage came to an end soon after 420. It is reasonable to suppose that the cessation is connected with the battle of Mantinea in 418. If the mint has been rightly located at Mantinea, then the suppression of the coinage after her defeat is not unexpected. Nor is it surprising to see in some of the final reverses the influence of the Athenian style (for even if in the dies R. 202 and 205 the hand of Phrygillos, who has been claimed as an Athenian,<sup>118</sup> is disputed, their Athenian style can hardly be denied),<sup>119</sup> for in this final phase of the coinage Mantinea was in alliance with Athens and Athenian engravers would have been more welcome in Mantinea than in any other Arcadian state.

<sup>116</sup> Thuc. V. 67.

<sup>117</sup> Thuc. V. 81.

<sup>118</sup> Seltman, *Masterpieces*, p. 16.

<sup>119</sup> Cf., e.g., the head of Artemis on the Parthenon frieze, Lullies and Hirmer, *Greek Sculpture*, pl. 155.

## ANALYSIS OF THE COINAGE

### THE IDENTIFICATION OF THE TYPES

The identification of the goddess on the reverse of the Arkadikon coinage seems to balance between Despoina and Artemis. The chief support for Despoina comes from Pausanias (VIII, 37, 9), who records that the Arcadians worshipped Despoina more than any other deity. What Despoina's real name was Pausanias was afraid to say to the uninitiated, but he declares that she was the daughter of Poseidon and Demeter. Those who support the claims of Artemis may also quote Pausanias (VIII, 5, 1), that the Arcadians as a whole have worshipped Artemis Hymnia from the earliest times, a worship which seems to go back beyond Despoina and to be more applicable to the Arcadians as a whole than was that of Despoina, who was worshipped chiefly in southwest Arcadia. There is one tenuous piece of evidence. In Period I the ethnic is usually abbreviated to AR, and the two letters placed in close association with the head of the goddess. That AR are also the initial letters of Artemis may well have been in the minds of the early engravers, that is if it was Artemis who was being represented. One obol reverse, R. 176, has a symbol in the field, but it has been impossible to associate this with any attribute of Artemis or of any other goddess, nor is there any real evidence for her identity, and in the catalogue her name is not specified.

As to the obverse type there seems no reason to doubt the identification of the seated figure as Zeus Lycaeus, an identification which goes back at least to Curtius in 1851; but the one obverse, O. 121, portrays Zeus Meilichios (see p. 11).

On the very rare half-obols the obverse type is the head of Zeus; the reverse, a head of Hermes in a close-fitting cap (as at Ainos) rather than that of Odysseus, as Babelon suggests (III, 671), for the popularity of Hermes in Arcadia may be judged from the Arcadian

bronzes which have survived;<sup>120</sup> in mythology Hermes was associated with the young Arcas, son of Zeus and Callisto. The attribution of the obol figured by Babelon (pl. 224, 1) with a laureate head of Zeus on the obverse and the infant Arcas on the reverse to this series is quite uncertain.

PERIOD I. ca. 490—ca. 477 B.C.<sup>121</sup>

CLEITOR (Sole Mint)

CLASSIFICATION

There are two main divisions to the Period. Sections 1 and 2 together contain the dies of some fine engravers; section 3, on the other hand, is largely in an inferior, different style, but is susceptible to the influence of sections 1 and 2.

SECTIONS 1-2 (1-28)

*A. Characteristics of the Obverses*

Zeus is always seated, facing left. At his extended right arm there flies an eagle; in his left hand he holds a sceptre. He is stockily built, often with a large head. His chest is in full front or almost full front; his legs in profile; the junction between legs and torso is always concealed by drapery. The folds in the drapery are represented only by a occasional line in relief running between the legs, and this is not apparent until section 2. On some early dies Zeus' sceptre appears to run behind his forearm; this fault is rectified in O. 7, but it does occur occasionally later.

With the exception of one die (O.16) the thrones are of the same type. The legs are rectangular with a pronounced neck just above the base. At the top of the back leg appears a pair of pellets capped by an abacus; the pellets are clearly meant to represent volutes. Above and a little to the left there is an arc in relief, which is probably not part of Zeus' drapery, but part of a low backrest. There are no

<sup>120</sup> Six representations of Hermes may be noted in Lamb's "Arcadian Bronzes," BSA 1925 alone.

<sup>121</sup> The evidence for the dating has been discussed on pp. 1 ff. and 4 ff. The numbers in parentheses following the individual section headings indicate the die-combinations assigned to the section and correspond to the entry numbers in the catalogue.

corresponding volutes above the front leg.<sup>122</sup> Zeus is set in a much higher plane than the throne and often seems to be about to fall off, but this fault is rectified before the end of the Period. The whole is set on a groundline.

The eagles have one wing above the body, the other below; at the end of section 2 one eagle is shown with both its wings above the body, overlapping (O. 13). In Seltman's first group (A) of the Elean coins,<sup>123</sup> which he dated ca. 510–ca. 471, at first the eagles have one wing above the body, the other below, and at the end have both wings overlapping above the body. But there is this difference between the early phases of the Elean and the Arcadian: in the former the outer edges of the wings are almost parallel, whereas in the latter the lower wing is usually thrust forward.

An unusual feature, both in Period I and later, is that more obverse dies than reverse dies are employed; and the fact that the reverse dies are allowed to continue in use with flaws, but the obverse not, suggests that the mint could find engravers for the Zeus die easily enough, but that engravers of the goddess' head were harder or more expensive to obtain. The vigorous style of some of the obverses, coinciding with the style described by Dr. Lamb for Arcadian bronzes,<sup>124</sup> "the figures are short and thickset with heads rather too large for the body" suggests that some of the obverses were cut locally, for the seated figure occurs frequently among Arcadian bronzes.

### B. *Characteristics of the reverses*

The head of the goddess is always turned to the left. The hair is done in a queue, sometimes in a *krobylos*. The hair on the earliest dies is rendered in beaded lines arranged in concentric curves to form a fringe along the brow with a prominent lock on the temple. Later the beads become minute until in the end the beading is not detectable. The nose-brow line is straight and almost vertical. Eyes are

<sup>122</sup> The Brygos Painter's cup in Tarquinia (RC 6846; Beazley, *ARV* 368/4; *CVA*, pl. 4, 1), which is contemporary with the coins of this period, provides a good example of the architecture of the throne.

<sup>123</sup> Seltman, *Olympia*, pl. 1.

<sup>124</sup> "Arcadian Bronzes," *BSA* 1925, p. 134.



frontal. The style in section 1 is fairly uniform. The leading engraver, who may be called the Copenhagen master after R. 1, was responsible for at least two other half-drachma dies, R. 4 and R. 6, and the obol die, R. 13. Section 2 shows a change in style to a larger and bolder concept of the head, but even here the influence of the Copenhagen master is still strong, e.g., on R. 8. In section 2 the eye is wider, the nose stronger, the chin rounder, and the lock of hair at the temple comes right down to the bottom of the ear: in all more solidity and less grace.

The ethnic is abbreviated to two letters: the alpha takes the form Α, the rho usually ϱ, but twice ϱ. The letters in section 1 are large with the legs of the alpha enclosing the goddess' chin, while the rho is set behind her head. In section 2 the form of the letters is the same (except for one possible example, late in the section, of ϱ), but they are often reduced in size.

It has been suggested above that some of the obverses were cut locally by Arcadian engravers, but not the reverses, because in the next Period (p. 40) a provincial style has been distinguished in the heads which is most logically explained as being native Arcadian, and this latter style bears no relation to the fine dies of the Copenhagen master or to any others in the sections. It is, of course, possible that more than one Arcadian state had its own individual style, but from the outset the engravers show a sureness and confidence which could only come from a school of some experience. The style of Corinth, perhaps in an old-fashioned form, seems to be represented in section 3; for sections 1 and 2 it will be necessary to postulate east Peloponnesian engravers of the first rank.<sup>125</sup>

### SECTION 3 (29-40)

#### *Characteristics of section 3 and its relation to 1 and 2*

The design of the obverses of section 3 conforms to that of sections 1 and 2. O. 27-31 are clearly imitations of the obverses of sections 1

<sup>125</sup> E. Langlotz in *Frühgriechische Bildhauerschulen* has distinguished various schools of east Peloponnesian sculpture (but no Arcadian). It has not been possible for me to relate the style of the Copenhagen master with any confidence to that of any of Langlotz' schools.

and 2. But R. 17 (Zeus on reverse) and O. 24-6 present differences: in R. 17, apart from the reversal of the types, there is a greater play of drapery and the corner of the *himation* hanging below the seat is a feature of Period II;<sup>126</sup> O. 24-5 have the legend AR; O. 26 has no legend, but is clearly by the same hand as O. 25: sections 1 and 2 show no obverses with legends. The eagles are rather carelessly cut (except O. 24) with only one wing shown and that above the body.

The heads of the goddess on O. 23, R. 18-21, and R. 24-5 have a style independent of that in sections 1 and 2; R. 18-21 bear a striking resemblance to the heads on Corinthian drachmas, e.g., R. 18-19 are very similar in style to the Corinthian drachma, *BMC-Corinth*, pl. 11,8, (PLATE XIV, g). Not only is the style similar, but the Corinthian habit of setting the head slightly askew in the incuse square is also present on these Arkadikon half-drachmas; the similarity is so close that the possibility of the employment of Corinthian engravers cannot be overlooked. However, R. 23 is very clearly a good imitation of R. 7 in section 2, while R. 22 is a poor imitation of the style in sections 1 and 2. The form of the letters on the ethnic is also different. Α is regular (except where imitating 1 and 2) and § occurs.

The position of the ethnic and the length of the abbreviation are not as stable in section 3 as in 1 and 2. On two occasions, O. 24-5, the ethnic occurs on the obverse (as well as on the reverse); some reverses have ARKA (R. 18 and R. 21), while others have AR: one pair of dies is anepigraphic and has the types reversed. It would be reasonable to conclude that, since such variations are more likely to occur at the beginning of a series than when the position of the ethnic and types have become stabilised, section 3 should come at the head of the series. But the whole of section 3 at any rate cannot be placed before sections 1 and 2, because the section 3 reverses, R. 22-3, are clearly imitations of reverses in section 1 and 2, as has already been stated, and these two reverses are connected by the

<sup>126</sup> I have doubts about the authenticity of this coin. Apart from the fact that it is the only coin with the types reversed in the whole series, the style of the Zeus resembles that of another bizarre coin (126), which also appears alien to the whole series. The heads, hair and beards, and musculature of both coins could be by the same hand; both are questionable.

obverse, O. 26, with the first part of section 3 which contains the unstable elements.<sup>127</sup>

#### REASONS FOR PLACING THE COINS OF PERIOD I AT HEAD OF SERIES

1. It is only in this Period that the hair is regularly rendered by beaded lines, and that by engravers of the first rank.

2. It is only here that the hair is regularly arranged in a fringe of beaded lines along the brow and at the temple; elsewhere it is arranged in roughly horizontal waves (not beaded) running from the front of the head along the brow.<sup>128</sup>

3. The eye is regularly frontal, although this is a feature of Period II also.

4. The reverse die, R. 6, is recut in Period II and used with an obverse which has a throne with cross-stays and a swan's head backrest. This type of throne occurs only at the end of Period I on one die, O. 16, but is a feature of Period II and the early part of Period III. The implication is that the backless type of throne with volutes and abacus, characteristic of Period I, preceded the type with cross-stays and backrest.

5. There is little attempt to portray the folds of drapery in this Period; the horizontal edge of the *himation* is shown at the waist, and at the end of the Period there is a vertical line representing a fold between the legs. In the following Period horizontal folds are shown below the waist as well, and a bunch of folds at the right thigh or, later, a tail of the *himation* over the thigh.

6. Only in this Period does the abbreviated ethnic sometimes occur on the obverse (O. 24-5) and in one die combination (29) the types are reversed. These variations are more likely to occur at the beginning of a series than after details have become fully established.

7. The weight standard of the Period is higher than elsewhere in the series. Again this is a feature which is more likely to occur in the earliest Period.

8. Letter forms show archaic features.

<sup>127</sup> As there is more than one mint operating later, the question arises as to whether section 3 might come from a different mint, but there is insufficient evidence to support this contention.

<sup>128</sup> There are some archaistic dies in Period II (R. 36, 39-40) where beading is retained.

## PERIOD II. ca. 477–ca. 468 B.C.

## CLEITOR MINT

The chronology of Period II and the division of the coinage at this point into three separate mints has been discussed on pp. 8ff. That it was the Cleitor mint which struck the coins of Period I is proved by the die R. 6, which after being used in Period I was recut and used in section 2 of this Period II (Cleitor): section 2 is connected to section I by die-links; therefore, of course, section 1, Period II must be from the same mint as Period I. Further, the weight pattern of Period I is repeated only in Cleitor II (cf. weight diagrams).

## SECTION I (45–53) ca. 477

The half-drachma obverses of this section present a uniform style; O. 36, 38, and 41 are by one hand, O. 37, 39–40, and 43 by another. The proportions of Zeus are better than in Period I, and the area of the rectus abdominis above the waist is shown in threequarter view; the swelling of the iliac crest is given particular emphasis. A heavy fold of drapery runs along the right thigh, and in O. 39–41 further folds of drapery are attempted. The throne has a swan's head top to the backrest, and at the end of the section cross-stays are added to the legs, which in turn flare sharply outwards at the base. The eagle's two wings overlap, outstretched above the body, as in section 3 of Period I; in all cases it seems to be perched at Zeus' wrist. In O. 40, in particular, the influence of Tegea, Period II, section 1 can be clearly seen. Several of these obverse dies are very similar and the possibility of 'hubbing' cannot be discounted.

The wreathed heads of the goddess have been described and discussed on pp. 4ff.

## SECTION 2 (54–72) ca. 475/3–ca. 468

The connection between this section 2 and the preceding one is maintained by several links. There is the obverse die, O. 40, which is common to both; O. 38A and O. 41A are recuts of dies used in section 1; while R. 6A is a recut of a die used in Period I. This frequent resort to

the recutting of old dies may indicate a difficulty in finding engravers now that the two other mints had opened, but the extensive die-linkage also indicates great activity in the mint, an activity, which coinciding with that in the two other mints has been interpreted as reflecting the battle of Tegea (pp. 16f.).

The change of style in comparison with Period I, most apparent in the heads of the goddess, indicates a change of engravers; and as this style, attractive as it is at times, seems clearly more provincial, it is logical to assume that the mint found its engravers near home, so that here in Period II and later in Period III of the Cleitor mint there could be found, if anywhere, evidence of an Arcadian style. The chief characteristics of this Arcadian style are: an unusually large ear with pointed lobe; a beady eye with pupil standing out boldly in relief; upper lid sometimes thick and more prominent than the lower, but often both lids are weakly defined; long slender neck with a flat outline to the back of the queue; the letters of the ethnic often untidy, including a kappa with the arms cutting the upright at separate points. These characteristics will be seen more clearly in Period III of this mint, but R. 35, 37-9 and 41 are examples in this section: R. 40 seems to be archaistic. R. 35 with the goddess' hair done up in a bun shows the influence of the Tegea mint, where the bun hair style is the chief characteristic, but apart from this die the goddess' hair is always arranged in a queue.

The obverses are of a standard pattern first used at the end of section I and deriving from the Tegea mint—Zeus seated to left on a throne with a swan's head backrest and cross-stays on the legs. The drapery on Zeus' thigh becomes an exaggerated bunch.

## PERIOD II. ca. 477-ca. 468 B.C. TEGEA MINT

### SECTION I (73-81) ca. 477

In this Tegea mint, both in Period II and in Period III, the heads of the goddess, with one exception, face right and always have their hair tied up in a bun at the back of the head. This hair style is found on one or two dies in the mints at Cleitor and Mantinea in imitation,

but in the Tegea mint it is the exclusive mode, and is retained when the head of the goddess is turned into the threequarter view in Period III. This characteristic is combined always with a competent standard of engraving to which at least one engraver, the Athens master, adds a style of sensitivity that is rarely equalled in the rest of the series. The Athens master has been so called after his die, R. 49, from which one of the best specimens preserved is at Athens. He was also responsible for establishing the design for the mint, for the first reverse, R. 47, is also from his hand. On his dies the hair is represented by lines, not beads, and is waved along the brow in a manner reminiscent of that on the Demareteion, which appeared only a short while before the first die of the Athens master. The binding of the goddess' hair into the bun reveals the delicate line of her neck, which is further emphasised by a necklace placed high. The engravers of the reverses on the whole favour an unabbreviated form of the ethnic; the Athens master, in neat script, at first tries ARK (R. 47), then ARKA (R. 48), finally the full ARKADIKON (R. 49). There is the same development in the size of the head: at first the miniature R. 47, then the larger R. 48, and finally the scale, which is most widely used in the mint, found on R. 49.

With the obverses there is at first the same experimenting with the scale. The very fine die O. 54 is on a miniature scale, O. 55 and 56 increase in size until O. 57 reaches the scale which becomes standard. Zeus is always seated to the left and holds sceptre and eagle. The eagle is at first of the pattern used in Period I with one wing above its body, the other below, but in O. 57 both wings overlap above its body, a position which remains constant for the rest of the Period. Zeus' throne is not unlike that used in Period I, but it has a backrest, which in O. 54 is awkwardly fitted into the seat: there seems to be the same difficulty in the two following dies, but in O. 57 the back leg of the throne runs smoothly into the backrest, and the square void between the legs is neatly filled with the diagonal cross-stays. This pattern and scale remain constant for the rest of the Period, and greatly influence the obverses of the other mints. For example, in Period II of the Cleitor mint the diagonal cross-stays appear at the end of section 1 (O. 40), and then remain constant in section 2. It might be argued that the imitation could be in the other direction,

but the dies in the Tegea mint are superior in quality, and elsewhere the Cleitor mint derives inspiration from Tegea.

The development in scale and pattern both on obverse and reverse has helped to establish the order of the first issues of this mint, but R. 48 was still in use and still being copied in section 2. The date of section 1 is established by the very close relation of the dies by the Athens master and the Demareteion; there is no doubt that there must be only a year or two between them. Further, the very close similarity between O. 57 in the Tegea mint and O. 40 of the Cleitor mint, which is die-linked to the wreathed goddesses dating from 477 confirms the contemporaneity of the first sections of these two mints.

#### SECTION 2 (82-103) ca. 475/3-ca. 468

The Athens master continued to work during the period of this section and cut the charming die R. 52, and perhaps R. 53, while the obol die R. 61 is also from his hand. The other chief engraver of reverses working in the mint at this time has a more provincial but none the less interesting style, who may be called the Koppa master because he alone in the whole series uses a koppa and not a kappa in the second half of the ethnic. He made two half-drachma dies, one of standard scale (R. 54), and the other slightly smaller (R. 55); like the Athens master he also cut an obol die (R. 60). His style, involving an eye with a prominent eyeball protruding from an arched upper lid, and a large ear, suggests the Arcadian engraver, but his work is much less provincial than that appearing in the Cleitor mint. In his designs he follows the Athens master closely.

Among the obverses, most of which repeat the style of O. 57 at the end of the previous section, there are two of outstanding quality, O. 59 and 60, which show two developments. In other obverses the folds of drapery were represented by horizontal lines below the waist, and diagonal lines between the legs, and a bunch of drapery at the right thigh, but O. 59 and 60 show a tail of the *himation* thrown over the lap and appearing below the level of the seat of the throne with a zigzag edge running back representing the folds in this tail. The second refinement concerns the structure of the throne; on O. 59 and 60 the rear leg of the throne is realistically rendered in the form of an animal's leg.

Section 2 is connected to section 1, apart from the style, by the die-link provided by R. 48. The style of the heads within section 2 is post-Demareteion, but the continued use of the frontal eye in dies of high quality confirms that the bulk of the section still belongs to the seventies. If section 1 began ca. 477, then a date soon after 475 for the beginning of 2 ought to allow sufficient time for the production of the coins in section 1. It has already been noted that section 2 shows much greater mint activity judging from the increased number of die combinations from almost the same number of dies that occurs in section 1, and it has been suggested that this activity (combined with a drop in weight) reflected a military campaign and that this campaign was Tegea, which numismatic evidence would thus date to the second half of the seventies.

PERIOD II. c. 477–ca. 468 B.C.  
MANTINEA MINT

SECTION 1 (104–108) ca. 477

The early obverses of the Mantinea mint in Period II show a characteristic representation of Zeus. He is seated to the left with his sceptre in his upraised right hand and a *thunderbolt* in his left on his lap. The eagle flies free towards him with wings extended. His *himation* covers his left shoulder, while his right is free. The throne has a high backrest ending in a swan's head. With one exception (O. 78) there are no cross-stays on thrones of this type. In front of the throne, in at least two dies, there is a footstool. This whole design is exclusive to the Mantinea mint at this time.

On the reverses the goddess usually has her hair done up in a closely meshed *saccos*.<sup>129</sup> In sections 1 and 2 combined there are nine of these *saccos* heads, of which six are anepigraphic: no other half-drachma reverses are anepigraphic at this time, and whether the anepigraphic dies have any special significance it is impossible to say, but they are sometimes die-linked with reverses which have the ethnic. Section 1 has two *saccos* heads, R. 62–3, but die-linked with the latter is R. 64, in which the hair of the goddess is done up

<sup>129</sup> For the *saccos* see F. Studniczka, "Das Gegenstück der Ludovisischen 'Thronlehne'," *JDAI* 1911, p. 181.



in a bun in the Tegean style. This is a competent copy of the Athens master's second die in the Tegea mint (R. 48); there is the same simple way of binding the hair (the Athens master later made this more complicated [R. 52]), the same ear-ring, and the same disposition of the four letters of the ethnic (the Athens master later used the full ethnic).

#### SECTION 2 (109-126 bis) ca. 475/3-ca. 468

The characteristic Mantinean obverse continues to be employed in this section (O. 74-5, O. 78-9), but it is now die-linked with obverses (O. 76-7) which imitate the design used in the Tegea mint<sup>130</sup> and in the Cleitor mint—the standard Zeus to left holding sceptre and eagle seated on a throne with cross-stays and backrest—a design which was less elaborate and easier to cut at a time when the mint was extremely active. Later, the effect of the fine Tegean obverses O. 59-60 was felt, for O. 80-1 in this Mantinea mint show a similar relaxed posture for Zeus as he bends forward slightly on his throne. Still later, an engraver of obverses was employed who imposed Mantinean features on the Tegean design: in O. 82-3 the eagle is allowed to fly freely in the field, as it was in the characteristic Mantinean design (and this remains a characteristic of the Mantinea mint hereafter), and the tail of Zeus' *himation* was allowed to fall below the level of the seat, again a practice in early Mantinean design (which was adopted by the Tegean engravers of O. 59-60), but the basic design for Zeus and his attributes remained the standard one of the Tegea mint. One feature this obverse engraver of Mantinea employed which was not repeated again was the introduction of a snake in the beak and talons of the eagle (O. 82), probably under the influence of the Elean coins.<sup>131</sup>

With the reverses the pattern is the same as in section 1—*saccos* heads characteristic of Mantinea combined with two imitations of Tegean bun heads: the first of these copies, R. 66, used with four

<sup>130</sup> The first example of Tegean influence on the Mantinean obverses can be seen in 108, where 0.73 is a close copy of 0.56.

<sup>131</sup> Cf. Seltman, *Olympia*. This eagle and the eagle on the Olympian coins must be the short-toed eagle, the only eagle which can hold a snake in its talons (see Peterson, et al, *Field Guide to the Birds of Britain and Europe*, 85).

different obverses, clearly derives from the developed style of the Athens master and is not unlike the version which was produced by the Koppa master in the Tegean mint, but there are distinct differences between the two, apart from the fact that the Mantinean bun head, R. 66, had kappa, not koppa as on the Tegean; the second Mantinean copy, R. 71, is a copy of a copy, for it derives from R. 66. The style is clearly coarser, but the engraver of R. 71 copies R. 66 line for line including a one-legged kappa. The line above the bun on R. 71 is interesting: on the original the Athens master had cut the iota at this point; the engraver of R. 66 mistakenly thought that this was the end of a hair band or at any rate made it part of the band and bun; the engraver of R. 71 did not understand the line as part of the band and cut it free, but he did not realise it was originally an iota because he dutifully copies the iota of R. 66 as well. These bun head copies of the Athens master's work in the Mantinea mint cannot of course compare with the originals, but such *saccos* heads as R. 62 and R. 69 have considerable charm and may be favourably compared with reverses of the other mints.

#### CHRONOLOGY OF SECTIONS 1 AND 2

The style of these Mantinean reverses with the frontal eyes even in heads of fine quality should preclude a dating for these sections much later than the seventies of the 5th century. Die-linked with a *saccos* head in the first section is a copy of a Tegean bun head dated soon after 477; therefore this part of section 1 cannot precede 477. This too is confirmed by Mantinean obverses which imitate the standard Tegean design. As the pattern of mint activity at Mantinea coincides with that in the two other mints (a period of normal activity followed by a longer period of greater activity), there is nothing to preclude the assumption that the mint at Mantinea opened approximately at the same time as the other two mints, i.e., ca. 477 and that the period of greater activity belongs to the second half of the seventies.

This period of greater activity as represented in section 2 is particularly marked in this Mantinea mint. The first 14 die combinations come from 5 reverse and 9 obverse dies and have left 35 specimens;

of the 17 coins recorded (109–116), 9 have weights below 2.80 [excluding the cut 114 (b)]—a marked reduction; in the same bracket and excluding the same broken 114 (b) all the specimens on which information is available have a die axis of → or ←; it seems likely that a temporary experiment in fixed dies was introduced (For a cause for this activity cf. pp. 15 ff.).

### PERIOD III. ca. 468–ca. 460 B.C.

#### CLEITOR MINT

##### SECTION I (127–141)

There are no die-links between the final section of Period II and Period III, but the “Arcadian” style characteristic of the latter part of Period II is maintained in this section 1. Of the obverses, O. 87 and O. 89 are coarse reproductions of the standard design in Period II. In O. 88 and O. 90–1 there is clear evidence of the influence of the two fine Tegean obverses O. 59–60 with the zigzag fold of drapery falling over the thighs in O. 88 and O. 90. O. 93 is exceptional in that it shows a statue base under the seated Zeus. This base is clear only in 138(d) (PLATE VI) and consists of a beaded horizontal line, below which is an echinus-shaped member representing the top of the forward corner of the base. Perhaps the engraver had in mind an actual statue of Zeus.

On the reverses too the “Arcadian” style prevails; but in this section it is possible to subdivide this style into several categories. First, and most primitive, is the long necked dolichocephalic head with the beady eye and heavy brow, and large pointed ear. R. 75–6 and R. 80 are good examples of this, and the style is matched by untidy lettering, including the K whose legs cut the upright at different points. Secondly, there is the much neater and more attractive hand visible in R. 77–9, in which the “Arcadian” element is betrayed only in the sharp eye and pointed ear. Between these two there is R. 81 a competent, but uninspired copy of R. 77. Finally, the attractive die, R. 82, would pass for “classical” were it not for the large, pointed, hollow ear. This latter head has the hair in a *krobylos*: in vase-painting this hair style dies out in the sixties of the

5th century,<sup>132</sup> and this is the last occasion in which it appears in the Arkadikon series.

R. 77-9 and R. 82 are competent enough dies to warrant a conclusion as to date being drawn from them. They have semi-profiled eyes, and the early sixties seems the most reasonable date for the beginning of the section; it could hardly be earlier because R. 76 (of inferior style), which is fixed by die-linkage earlier than the R. 77-9 trio, has a definite profiled eye (as has R. 81). It may seem surprising that the profile eye occurs in less competent dies before it occurs in competent ones. The reason may partly be found in the way that the eye is treated as a whole in this "Arcadian" style: the pupil is bead-like and the eyelids often unemphasised; as soon as the practice of leaving the eyelids slightly open at the inner corner begins, the thin lids quickly shrink further. But in the case of R. 76 the plane of the cheek drops abruptly into the plane of the nose and mouth, creating a ridge running from the mouth to the centre of the eye; the right hand half of the eye, therefore, has to be removed or it would protrude over the plane of the nose, so that profiling here is produced quite incidentally. In the Mantinea mint the profile eye is slower to establish itself, and in Tegea the development is concealed by the adoption of the threequarter view.

## SECTION 2 (147-154)

The first reverse of section 2, R. 91, is another example of the long-necked "Arcadian" representation of the goddess with an eye which seems to be profiled. It is coupled with two obverses of poor design and execution, but at this stage, after a long run of very inferior Zeuses, the mint officials cease to employ the local smith to cut them an obverse, and R. 91 is then coupled with an obverse of new and powerful design—a seated Zeus facing front with the usual attributes of eagle and sceptre. This new engraver cut three half-drachma obverses, O. 103-5, and two obol dies, O. 106-7, with the frontal Zeus and provided a splendid beginning for the improved obverses which follow in the mint to the end of the decade.

<sup>132</sup> Cf. E. Haspels, *Attic Black-figured Lekythoi*, pp. 72-3, n. 2.

Die-linked with these obverses are two reverses, the first of which, R. 92, is cut in the same powerful style of the obverses, and reflects the bigness and nobility of early classical sculpture. The hair is taken simply along the brow, down the temple, back into a queue and held by a double band; eye is profiled and features firm and strong; from a slender thread around the neck there hangs a large pendent stone, the shape of it like a small pointed aryballos; the stone has a neck to which the thread is tied.<sup>133</sup> An obol reverse is by the same hand (R. 94). The other half-drachma die in use in this section adopts the hair-style of the Tegea mint, but along the brow and over the temple the hair is combed down into a fringe, the eye is oblique and open at the inner corner; but the shape of the nose was spoiled (recutting?) before it had been long in use.

It is surprising to see in this Cleitor mint, which since ca. 477 had been decidedly provincial, the production of such fine dies, but there is no doubt of their attribution, for they are firmly fixed by die-links with the dies of typical "Arcadian" style.

### SECTION 3 (155-165) ca. 463/2

The high standard of the obverse dies is maintained during the period of this section; in fact an engraver who had cut dies for the Mantinea mint in section 2 was employed to cut the first two dies, O. 108-9, for this Cleitor mint; this is the only assumption that can be made from the close similarity between this pair of dies and those in the Mantinean mint. But this seems to be the only clear case of such a practice, and whereas in Mantinea, Period III the style of these obverses is carried on to the end of that Period and in fact into the next Period, in this section of the Cleitor mint the style is intrusive. Their design is clearcut—Zeus seated, facing left with a large eagle with wings outspread filling the triangle between his knees and head; the throne simple, with backrest, but no cross-stays. Apart from the half-drachma dies this engraver also cut an obol obverse (O. 112).

<sup>133</sup> Dr. R. A. Higgins suggests the following parallels for the stone: Amandry, *Collection Stathatos* I, no. 45 and Lullies and Hirmer, *Greek Sculpture*, pl. 20, 1 (Berlin Goddess).

These obverses are linked with a pair of dies by one engraver (O. 110-1), who also cut an obol obverse (O. 113), with a different design—Zeus to right, his left arm held high with his sceptre and draped with his *himation*, his right holding a thunderbolt. These differ radically from the Zeus with the thunderbolt design of the Mantinea mint in Period II: apart from the advance in style, these Zeuses face right and the right hand holding the thunderbolt hangs down below the level of the throne's seat, while the eagle plays a much less important part in the design.

On the reverses the influence of the Mantinea mint is strong and the "Arcadian" style is absent from this section, but whereas the heads in the Mantinea mint all face left at this period, those of the Cleitor mint face right (as they did in the preceding sections) and whereas the Mantinea mint prefers the ethnic abbreviated to ARKA, the Cleitor mint on the whole prefers the unabbreviated form. The first reverse, R. 96, has rather an old-fashioned style, but R. 99 and 100 are more developed in a softer, more relaxed style with profile eyes.

The order in which sections 2 and 3 are placed is determined by the obols. The obol reverse, R. 94, was used in section 2 coupled with a frontal Zeus, the characteristic obverse of that section. In this section 3 the same reverse is used with the obverse O. 112, which is by the same hand as the first half-drachma dies of the section, and then with O. 113, which is by the same hand as the half-drachma dies O. 110-1: Zeus to right with thunderbolt. The flaws on R. 94 are clearly more advanced when used in this section 3, so that, as far as the obols go, the frontal Zeus precedes Zeus holding a thunderbolt. It seems logical to assume that the same pattern will prevail with the half-drachmas, and for that reason section 2 with the frontal Zeuses has been placed before section 3 with the Zeus holding thunderbolt motif.

Section 3 has a higher percentage of die-links to the combination and of specimens recorded to each die than any other section of the mint in the Period, and it has been suggested on p. 23 that it reflects the campaign of Dipaea, since an increased activity can be observed also in the Tegea mint and in the Mantinea mint, though the latter may be a little earlier.

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## SECTION 4 (166-173)

The thunderbolt design of section 3 is dropped and Zeus returns to the usual left orientation, but the rather delicate style in low relief is continued. The reverses are disappointing. R. 101, from the first die combination (which is not fixed by linkage), carries on the style of section 3: the die-linked series which follows is headed by a reverse (R. 102) in heavy style with an over-emphasised sterno-mastoid which is allowed to affect the shape of the truncation (probably under the influence of the threequarter head dies of Tegea); the eye is clearly in profile. This is die-linked to a reverse, R. 103, which has a definite frontal eye. The reason for this stylistic paradox is that the engraver of the second die is copying a die from Period II in the Mantinea mint, R. 64 (PLATE V); there is the same hair style, identical binding of hair, similar ear-rings, and the four letter abbreviation of the ethnic. It has been noted that R. 64 is itself a copy of the Athens master's die R. 48. It is clear that here and in many other cases an engraver has taken a circulating Arkadikon coin (in this case from another mint) and copied it closely, preferring to keep the frontal eye of the original, but he has his own way of cutting a rho, an angular one with a tail but no upright, which he reproduces on an obol he cut at the same time (R. 107). R. 104, which is linked by a common obverse, and R. 105, which is not, are probably in the same category of copies.

The mint was clearly less active during the period of this section and on the reverses at least employed no engravers of originality. The coinage contained in it should reach the end of the decade, but not much farther.

The order in which the four sections of Period III in this mint have been placed was determined as follows. Sections 2 and 3 form a central block with their own order fixed by the obol die-link (see sec. 3); section 1 with all its obverses deriving from Period II and its reverses in the "Arcadian" style, and with the style of obverses and reverses continuing into the head of section 2 clearly belonged before section 2; in section 4 the heavy sterno-mastoid and irregular truncation of R. 102 suggested a time after the threequarter heads of the Tegea mint (in which these traits are common) had become

established, and the obverses in their style seemed clearly to follow the thunderbolt designs of section 3 and not precede them, so that there seemed no more likely place for section 4 than after section 3.

PERIOD III. ca. 468–ca. 460/59 B.C.

TEGEA MINT

SECTION I (174–184) ca. 468

The juxtaposition of the final section of Period II in the Tegea mint and this section I of Period III is established firstly by the obol obverse O. 68 which was first used towards the end of II, and is now used again in this section with an advanced flaw coupled with the reverse R. 111 (182); this obol reverse was then used on a half-drachma flan (177) with the main obverse of the section O. 121, the standing Zeus. This obol reverse is by the same hand as the second half-drachma reverse, R. 109. Secondly, an obverse die, first used near the beginning of Period II (O. 55) was brought out of retirement in a poor state and used with an early threequarter head of the goddess, R. 113. O. 123 seems to be in the same class as O. 55 (a discarded die brought back into use) but the occasion of its previous use cannot be located. This resuscitation of old dies, the use of an obol die on a half-drachma flan, and the fact that R. 109 continued to be used after the goddess had grown a beard from a flaw indicate that the mint was short of dies at this time, of reverse dies towards the beginning of the section and of obverse dies at the end.

Two of the dies of this section have been discussed on pp. 21ff.; O. 121, the Zeus Meilichios, associating this section with the Mycenaean campaign, and R. 108 to help in the dating of both. It was there claimed that R. 109 was a copy of R. 108, the product of a second rate engraver who followed his model closely; the bun is almost covered by the hairband as on R. 108; there is the same shape of nose in an exaggerated form (perhaps due to a flaw); the tip of the nose well in advance of the jaw; the same position and form of letters (angular rho and triangular delta); the same finer hairs on the nape of the neck. But the copyist did not attempt the modelling of the neck or imitate the profile eye; but his goddess, for all that, did not deserve the indignity of the beard she is allowed to grow.

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The next reverse, R. 110, shows a frontal head of the goddess, still with the bun hair style, the characteristic style of the Tegea mint, the bun placed on the side of the head in the same defiance of perspective as on the right-hand daughter of Peleus on the Villa Giulia painter's Cambridge hydria.<sup>134</sup> The frontal head is followed by a threequarter head, R. 112. Agnes Baldwin Brett in her "Facing Heads on Greek Coins"<sup>135</sup> had stipulated that in the development the frontal head preceded the threequarter, and this the die-sequence bears out. The frontal head is hardly attractive, and the first three-quarter head heavy in style, but the last threequarter head of the section (R. 114) is a great advance, the engraver of which continued to work in the period of the next section, and who may be called the Paris master after his die R. 114.

#### SECTION 2 (185-195)

Section 2 is connected to section 1 by the style of the threequarter heads. For the engraver of the die R. 114 at the end of the last section, the Paris master, continued to cut dies for the mint during the period covered by this section; he was responsible for R. 117, R. 119, and the obol die, R. 122, perhaps also R. 121. One of his characteristics is the foreshortening of the bun in the threequarter view so that it is given an upswept appearance continuing the graceful line of the neck, while in the lower part of the neck he does not over-emphasise the sterno-mastoid as other engravers tend to do. In the work of the other engravers the style of R. 113 can be seen again in R. 118, and that of R. 112 in the obol die R. 120. These threequarter heads were circulating in Arcadia in the sixties of the 5th century (cf. p. 21) and this Arcadian goddess was the first to be represented successfully on Greek coins in this threequarter view, being preceded in fact only by crude satyrs, Dionysuses and Apollos, and various unidentified masks;<sup>136</sup> and anticipating by more than a generation the well-known Sicilian heads, in whose company the Arcadian goddess of R. 119 would by no means be disgraced.

The characteristic obverse of this section and the two following is one which shows a back view of Zeus seated to right; in this section

<sup>134</sup> Beazley, *ARV* 623/66; see *CVA*, pl. 35, 1 and 40, 8.

<sup>135</sup> *AJN* 1909, 116.

<sup>136</sup> *Ibid.*

Zeus has bare buttocks, but in the last die of this section and in an obol die by the same hand, O. 129 and O. 132, and thereafter, he is covered from the waist down by his himation. The eagle is often larger than before in this mint with both its wings extended above its body, while the throne receives less emphasis—the swan's head disappears from the backrest and the cross-stays from the legs.

### SECTION 3 (196–206) ca. 463/2

The juxtaposition of section 2 and section 3 is determined not only by the style, for threequarter heads still continue with competent, but less inspired versions of the Paris master's die while the back view of Zeus still remains the characteristic design for the obverses, but also by die-linkage. The obol reverse R. 121, which had been used in section 2 coupled with a naked Zeus, is now used (showing increased signs of wear) on half-drachma flans in this section 3 with two of the main obverses.

On p. 23 the increased mint activity of this section is interpreted as reflecting the campaign of Dipaea, but the activity does not seem to have extended to the obols, for whereas sections 1 and 2 have more than their share, there are no obol dies in the style of the half-drachma dies of this section. It is possible that some of the obols attributed to the last section were actually struck during the period of this section, but there is only one pair of obol dies belonging to the next section. Probably, it was found that that there were sufficient obols already in circulation. It would be unwarranted to suggest that as early as this Tegea started to strike her own small silver,<sup>137</sup> trihemiohols and smaller denominations, with her own type, the Gorgon's head.

### SECTION 4 (207–215)

The threequarter heads of the goddess and the back views of Zeus persist in this section with different engravers. On the obverses the first engraver (O. 138–9) certainly gives a better rendering of the threequarter back view and curves the spinal furrow more successfully than his predecessors, while the horizontal position of the right arm gives greater vigour to the design, but the later engravers return to the less ambitious earlier style. The chief reverse engraver has a

<sup>137</sup> *BMC Pelop.*, pl. 37, 6–7; see Babelon, *Traité* III, pl. 227, 9–10, 19.

competent technique, but produces heavy, masculine types which are quite unsuited to the delicate bun hair style.

The coins of this section must have been struck right at the end of the sixties and in the early fifties of the 5th century.

#### THE LETTER RHO IN THE TEGEA MINT

In Period II ϱ is the only form of rho that is found, but in Period III there gradually appears the rho without a tail: at first it hardly has an upright either. R. 108 adopts a rare angular form ϱ without the tail, but with the suspicion of an upright. R. 109 copies the angularity, but gives it the tail it had always had in the mint and in the rest of the section ϱ. In section 2 besides ϱ there occur further attempts at the tailless rho, but still with the barest upright; in fact like R. 108, but rounded ϱ. In section 3 the upright grows longer, but still ϱ is found, while in section 4 the fully developed form ϱ appears, but still in this section the engraver of R. 132 uses ϱ. This engraver felt the difficulty of distinguishing rho in the form ϱ from the delta Δ and actually cut ARKARIKO on his die.

#### SECTION 5 (216–220)

The following die combinations, 216–20, present problems. 216 on its own would fit into section 3, for the obverse, O. 145, shows a back view of Zeus, the characteristic design of Period III in the Tegea mint, and the reverse, R. 136, is similar in style to R. 124 and R. 128. But then this reverse is coupled with another obverse, O. 146, which bears no relation to the Tegea mint: O. 146 in the next die combination (218) is coupled with a reverse, R. 137, which would not look out of place in the Mantinea mint. It is possible that in section 3 the activity of the mint was such that it accepted dies which did not comply with the usual designs and 217 and 218 could then come under this heading and be allocated to section 3. 219 is another hybrid, though it is not die-linked to the preceding, and must be related to section 4, because the reverse, R. 138, is obviously an imitation of the early section 4 reverses, but the obverse is not characteristic of the Tegea mint but rather of the Mantinea mint. It might be argued that since the Tegea mint was so conservative, contamination of the types would most likely happen when the

mint was on its last legs, and this might be supported by the rather low weight of the existing specimens from 216–8, so that this section might be allocated to the fifties. However, the reverse, R. 137, with its frontal eye would look very out of place near the middle of the 5th century, and its proper place seems the sixties. It has been considered best to place them all in this section from which they can be extricated if further die-link evidence turns up. 220 is a very barbarous pair, but three specimens of it have been recorded.

PERIOD III. ca. 468–ca. 462/460 B.C.

MANTINEA MINT

SECTION I (221–227)

The connection between this section and the final section of Period II in the Mantinea mint is determined by die-linkage; O. 81 is a common die. Further, the style of the obverses O. 82–83 in II, 2 is quite clearly continued in O. 149–52; there is the same powerful torso with similar characteristic renderings, but the engraver of O. 150–2 produced greater variation in the treatment of the eagle.

In the reverses, however, there is a definite change of style marked by delicate wavy lines for the rendering of the hair (one cannot escape the suspicion that the *saccos*, the characteristic of Period II has been abandoned so that the engraver may use to advantage his special skill in rendering the hair), the attempt at profiling the eye, the modelling of the neck, and the adoption of the abbreviation of the ethnic to ARKA with the letters set symmetrically in the square incuse. A pair of obols (226) shows a style identical with that of the half-drachmas.

A comparison of the head on R. 141 with that on R. 108, the first die of Tegea, III, 1, which was dated to ca. 468 will show a strong similarity: the development of the eye is at the same stage; in both, the hair is rendered by wavy lines; in both, for the first time in their respective mints, the neck is modelled successfully. The sections to which they belong should be contemporary. R. 77 in the first section of the Cleitor mint shows the same stage of development of the eye, but in a more provincial style, and the modelling of the neck is there delayed.

The heads of the goddess (with the exception of the doubtful R. 143) face left.

## SECTION 2 (230–241)

On the reverses the hair-style adopted in the first section of this Period is retained, i.e., the hair is taken along the brow, under the headband, and down onto the temple, then back under the band and into the queue with the mass of the hair. However, the method of rendering the hair is different; in section 1 the engraver had specialised in fine wavy lines; in section 2 the lines of the hair are much straighter and at first thicker. On the first new die of section 2, R. 145, the eye is still frontal, but the following die has the eye open at the inner corner (R. 146), and R. 150 has clearly reached a stage in the development of the eye in advance of any die in the mint; this is a fine head, which must be classed among the most attractive early classical coins. More coins have survived from the combination to which this reverse belongs (240) than from any other in the whole series. The four letter ethnic continues to be the standard abbreviation and the fully developed form of the rho P appears (cf. p. 54 for its appearance in the Tegea mint). The orientation of the head seems to have some significance, for all the heads again face left, while the heads in the Tegea and Cleitor mints face right, and there comes to mind an analogous distinction between mints which had an agreement<sup>138</sup>—Phocaeon obverse heads face left, while Mytilenaeon obverse heads face right.

The style of the obverses of section 2 closely resembles that of 1, but they show a better threequarter view of the torso, the proportions are more satisfactory, and the posture more relaxed.

Section 2 is connected to Period II by the ubiquitous reverse, R. 67, but there are no die-links between sections 1 and 2, although 1 is itself die-linked to Period II by O. 81. O. 81 is in good condition when it is used in III, 1, and there seems to have been no great lapse of time since its use in II, 2, but R. 67 is in a wretched state in III, 2 and gives the appearance of being a makeshift when the mint was short of a reverse. Further, the style of the obverses in section 2 is more advanced, and the reverses seem more strictly early classical with the simply engraved hair and more vertical nose-brow line than the somewhat fastidious style of section 1, and lead up in unbroken linkage to R. 150, the latest and the best in the Mantinea mint.

<sup>138</sup> E. L. Hicks and G. F. Hill, *A Manual of Greek Historical Inscriptions*, no. 94.

The increased activity of the mint during the period of this section, marked by high die-linkage and the use of dies with gross flaws (including the discarded die R. 67), has been interpreted as reflecting the campaign of Dipaea, but since there are fewer dies in this mint before the increased activity compared with those at Cleitor and Tegea, it may be assumed that the period of greater activity came a little earlier in the Mantinea mint. A reason for this is suggested on pp. 25 f. In the other mints after the period of increased activity there is in each a fourth section of more normal working which has been allocated to the very end of the sixties and the beginning of the fifties. In this Mantinea mint there is no fourth section: it is possible that the early part of Period IV of Mantinea is contemporary with the two fourth sections of Cleitor and Tegea; on the other hand the number of specimens that have survived from section 2 of Mantinea is particularly large and may well indicate exceptionally large issues.

PERIOD IV. ca. 462/o-ca. 428 B.C.

MANTINEA (Sole Mint)

At the end of Period III the Cleitor and the Tegea mints closed down, but the Arkadikon mint at Mantinea continued to strike the confederate coinage. To substantiate the conclusion that it was the Mantinea mint that continued to operate it is necessary to show the continuity between Mantinea III and Period IV. There are two die-links, one for the half-drachmas, another for the obols. O. 150 from III, 1 is now used in Period IV in a somewhat worn condition with R. 151 bis, a goddess with rolled hair and very close to R. 152, which is the first of five die-linked reverses. Among the obols the obverse, O. 73, which was first used early in II (108), is now used again with R. 169 (267), which has a head in the same style as the half-drachmas of the first part of section 1. The reason why a die had to be brought out of so long a retirement was that the Mantinea mint had struck very few obols while the Cleitor and Tegean mints had struck many more, so that when the Mantinea mint was left to operate on its own, it had to find obol dies in a hurry and fell back on O. 73 for a time, and few obols are struck hereafter.

At what point exactly in the issues of the Mantinea mint the two other mints stopped, it is difficult, perhaps impossible to determine, but the introduction of the heads with hair in a roll has been chosen as a suitable point, with the proviso that these coins may have been struck a little before 460, perhaps before the other two mints had actually closed.

#### SECTION I (242-257; 267-273)

The design of the obverses of section I remains the same and can be traced back to late in Period II, but there is now development in the representation of the drapery, particularly in the diagonal folds below the knee. O. 167 is a splendid die, representing the culmination of the development from the end of II: here the final harshness, the right hand held out with all the fingers extended stick-like, is removed, and the hand is shown in side perspective. On O. 165 and 167 the legs of the throne are "turned" with an hour-glass pattern at the foot. The remaining obverses of the section, O. 168-71, are of similar design, but not of such high quality, and are probably copies of the preceding dies in the section.

On the reverses the fixed orientation of the head to the left was abandoned, probably on the closing of the other two mints. The first four reverses adopt a new hair style (the hair at the back of the head is rolled around the band) but the queue style returns in R. 155 and continues until section 4. Both hair-styles, however, are products of the same school, but R. 161 is in a different and more advanced part of that school. R. 162-5 must come from a different school altogether; apart from the incidental difference of hair-style (the use of binding or net), the eyes are more beady, the eyelids less distinct, and the neck less modelled. These characteristics can be confidently labelled "Arcadian," but the more refined "Arcadian" style of R. 162 and 164 is attractive. That this second half of the section with the change of style is connected with the first half (apart from the relation of the obverses) is proved by a die-linkage in the obols where a reverse, R. 175, in the more "classical" style is linked to R. 176, which shows the same traits as R. 162 and 164, while in section 4 among the half-drachmas also the "classical" dies are linked with the "Arcadian." Thus it can be seen that the engravers

who would perhaps have worked for the Cleitor mint, had it been open (it was in the Cleitor mint that the style had been most prevalent), now contributed to the sole surviving mint at Mantinea.

Among the obols of section 1 there are two dies which merit special mention. The first obverse, O. 73, which had been used already in II, 1, is evidence for proving that the coins of Period IV must belong to the Mantinea mint. The second die of interest is the reverse, R. 176, which has a symbol in the field—an olive (or laurel) leaf and berry behind the head of the goddess. This is the only case of the use of a symbol in the whole of the series. There are several interpretations which might be suggested for this symbol:

1. It might give a clue to the identity of the goddess, as the ear of corn would symbolise Demeter, but a leaf of olive (or laurel) is not associated with either of the two goddesses who have been suggested as the original for the Arkadikon goddess—Artemis and Despoina. If it had been a constant symbol of olive, it might have indicated that the goddess was Athena.

2. The laurel is Apollo's tree; but it is difficult, yet not impossible to work Apollo into an Arcadian context. Apollo had a temple in Mantinea (Pausanias VIII, 9, 1), and Apollo was honoured by the Mantineans after a victory over Tegeans and other Arcadians in ca. 422.<sup>139</sup> It might be thought to reflect the so-called Sacred War which Sparta fought for the Delphians in ca. 449, but there is no mention of Sparta's allies having taken part in the campaign.

3. But the leaf is more likely to represent olive. If the leaf could symbolise the victory olive wreath given as a prize at the Olympic Games, Kyniskos, the Mantinean boy boxer, whose statue was carved by Polycleitus, comes to mind, for the statue base with its inscription has been dated ca. 450, while a probable copy of this Kyniskos, the Westmacott athlete, belongs to this period,<sup>140</sup> and this must be the approximate date of the obol with the leaf.

4. About this time Corinth had begun to set symbols in the field on the reverse of her staters, and, perhaps of closer relevance, the first symbol occurs in the field of Elean coins during Seltman's

<sup>139</sup> SIG I, 98f., no. 78.

<sup>140</sup> Pausanias VI. 4. 11; E. Löwy, *Inschriften griechischer Bildhauer*, 50; Jeffery, *Scripts*, 212; Richter, *Sculpture*, 252.



Group C, Series X, 95 (452–432)—a leaf, which Seltman calls an olive leaf. It is, therefore, most feasible that this leaf on the Arcadian obol is an isolated imitation of the new practice at Elis and Corinth.

#### SECTIONS 2–3 (258–266; 274)

These sections consist of two small die-sequences with one or two associated coins which do not conform to the designs in sections 1, 4 and 5, but which adopt partly the earlier designs of Tegea and partly those of Mantinea. Section 2 begins with an obverse which shows the influence of the thrones and long right arm of section 4 (and this fact must date the section); the reverse, R. 166, with which it is first coupled is very close to the first reverses of section 1, goddess with hair in roll. But then this reverse is coupled on an unpublished coin<sup>141</sup> with the obverse, O. 173, which shows a back view of Zeus in the manner of Tegea III. This O. 173 is also coupled with a queue goddess, R. 167, inscribed with the full ethnic instead of the usual Period IV four letter abbreviation, and then with a bun goddess, R. 168, which is a clear copy of R. 103,<sup>142</sup> a die used at the end of Cleitor III. Another back view of Zeus, O. 174, probably a copy of R. 173, is coupled with a crude *saccos* goddess. In section 3 a three-quarter head, R. 170, is coupled with Zeuses which are in Period IV style and there is a die-link with a *saccos* goddess, R. 171, also of Period IV style.

It might be argued that there is no reason why a mint should not vary its designs, especially if those designs are familiar to the public, and this may be the answer for sections 2 and 3, but the weight of all the coins in section 3 and of one of those in 2 is very low, while it will be remembered that low weight was a feature of the other hybrid section, Tegea, III, 5 (p. 54). This fact suggests the possibility that these hybrid sections may have come from other than the Mantinea mint.

#### SECTION 4 (275–280; 296–298) ca. 446–ca. 440

The first reverse of this section, R. 180, is in the same style as the reverses in the middle of section 1, but there is more assurance about

<sup>141</sup> The link may not yet be published.

<sup>142</sup> R. 168 has a profile eye, whereas R. 103 has a frontal eye.

the profiling of the eye and the rendering of the mouth, and the engraving of the hair is less stiff. In the ethnic the rho is no longer placed immediately under the chin, its position in section 1 and in the final section of Period III. With this fine die in "classical" style there is die-linked first a creditable reverse, in which the goddess has her hair bound up (R. 181), and then a reverse which is clearly in the "Arcadian" style (R. 182). The obverses with which these reverses are coupled also have the same grading: a "classical" version, O. 185; a creditable die, O. 186; and an "Arcadian" one, O. 187. The engraver of O. 185 cut a throne without a backrest, a design which had not been used regularly since Period I but which now comes back into fashion.

SECTION 5 (281-295) ca. 440-ca. 428

In section 5 no alteration is made in the design of the obverses, except that on one die, O. 194, the two rear legs of the throne are shown in perspective. The thrones usually have no backs, but when they have, a knob replaces the earlier swan's head on the top.

The distinctive style which has been called "classical" (by comparison with the "Arcadian" style on such dies as R. 162-5 and R. 182) is seen in the two reverses of strong Corinthian influence, R. 185-6, and in the fine die, R. 189 (each discussed on p. 27.) which could have been cut by an Argive or an Athenian, but in R. 183 the "classical" style has the closest affinities with certain copies of Argive works usually attributed to Polycleitus. A comparison of R. 183 with copies of the head of the Doryphorus<sup>143</sup> (PLATE XIV, i-j) shows a very similar cast of feature; the proportions are close, as are the length and set of the nose, the form of the jaw, and the strong neck; it is easy to forget that one is looking at a female head on the coin. R. 180 of section 4, as has been stated above, is very close in style both to R. 183 and to the sculpture, and although the jaw is not so square and the neck less modelled, it clearly comes from the same school, perhaps even from the same hand as R. 183: and among earlier heads, R. 153, 155-60, 172 and 175 must be brought within this same group, while others come very close. Further, the style

<sup>143</sup> Richter, *Sculpture*, fig. 645-8 (= PLATE XIV, i) and p. 248 for further reference.

can be seen even in the final section of Mantinea III, in particular in the fine head, R. 150. That these heads, the main part of the reverses of this Period IV, must be associated with Argive art is also suggested by the form of the letter rho in the ethnic. In the Tegea mint the developed form P was seen before that mint came to an end (R. 117-8, 123, 127, etc.), but in the Mantinea mint from R. 150, even in Period IV R is still the usual form. Dr. Jeffery<sup>144</sup> notes that this latter type, R, was the normal type in Argos till the end of the century, whereas in most other places the form P was common by the middle of the 5th century.

A rare hair style appears on R. 183-4: the hair on the front part of the head is combed forward and tied in a bow on the forehead. This style also occurs on a bronze in Berlin,<sup>145</sup> which Langlotz attributes to Cleonae. He also attributes to Cleonae two other bronzes which have this knot of hair on the brow, but it occurs elsewhere, e.g., on the Sunium Stephanophoros and on the Chatsworth Head.<sup>146</sup>

#### PERIOD V. (299-312) ca. 428-ca. 418 B.C.

##### MANTINEA (SOLE MINT)

The style of the obverses remains the same in Period V as in section 5, Period IV, with the exception of O. 208, which has been discussed on p. 30. The eagles, however, undergo a slight change, which has been attributed on p. 30 to the influence of the Sikyonian doves.

On the reverses the developed form of rho P becomes universal, and the fact that the style of the first reverses in the Period goes back to R. 185, which showed Corinthian influence, might suggest that the Argive influence on the Arkadikon coinage became somewhat relaxed. At any rate the later dies seem to show Athenian influence, for the mint celebrated its fifty years of coining and its alliance with Athens by employing an engraver at least of the calibre of Phrygillos, perhaps the master himself, who was also destined to bring the Arkadikon coinage to a distinguished end.

<sup>144</sup> Jeffery, *Scripts*, 151.

<sup>145</sup> Berlin Fr. 1828. Langlotz, *Frühgriechische Bildhauerschulen*, pl. 7.

<sup>146</sup> Langlotz, op. cit., pl. 11; Strong, *Antike Denkmäler* IV, pl. 21-3.

# THE CATALOGUE



PERIOD I. ca. 490—ca. 477 B.C.

CLEITOR (Sole Mint)

SECTION I

1. **O. 1:** Zeus' hair in roll; sceptre off flan in (a). For description of obverses see p. 34.  
**R. 1:** Goddess' hair in queue. By the Copenhagen master (see p. 35). A 9  
\*(a)<sup>1</sup>Copenhagen (SNG 164). → 3.04
2. **O. 2:** By same hand. Zeus' hair in *krobylos*; sceptre runs behind his l. forearm; eagle off flan.  
**R. 2:** hair in *krobylos*; planes of face awkward, jaw set in too high a plane. A 9  
\*(a) London (*BMC Pelop.* 7, pl. 31, 13) = IB, pl. 7, 10. ↙ 2.92
3. **O. 3:** Similar to O. 2, but on smaller scale.  
**R. 3:** Similar to R. 2, but hair in queue; planes awkward. A 9  
\*(a) London (*BMC Pelop.* 9), perforated. ← 3.05
4. **O. 4:** Similar to O. 2; line of flesh under armpit.  
**R. 3:** Same die.  
\*(a) London (ex Weber 4283). ↘ 2.94  
(b) Budapest.  
*Rev.*: (b) lacks A at chin. Flaw under neck in both.
5. **O. 4:** Same die.  
**R. 2:** Same die.  
\*(a) 's Gravenhage (Van Rede Coll.) = Hirsch XIII, 2750 = Naville VII, 1282 = Schulman, Dec. 1926, 178. ↘ 3.01  
(b) Hirsch XVI, 591.  
*Obv.*: slight flaws between knee and r. arm in both, also between arm and eagle's talons.  
*Rev.*: lower lid broken.

<sup>1</sup> The asterisk preceding an entry indicates that the piece is illustrated in the plate section.

6. **O. 4:** Same die.

**R. 4:** Similar to R. 1 and by Copenhagen master. A 9

\* (a) Boston (Cat. 1239). 2.87

*Obv.*: flaw at r. elbow in addition.

7. **O. 5:** Similar.

**R. 4:** Same die.

\* (a) Berlin (ex Prokesch-Osten) = Weil, *ZfN* 1882, pl. II, 1 (drawing).

↙ 3.01  
(b) Vienna. ↑ 2.8

*Obv.*: flaw between l. side and elbow in both.

*Rev.*: flaw at lower lip in both; flaw at back of head in (b).

8. **O. 6:** Similar to O. 1, but stiffer.

**R. 5:** Similar to R. 1, but coarser; head larger. A 9

\* (a) Robinson. ↓ 2.92

*Rev.*: flaws behind and above head.

9. **O. 7:** Smaller, as in O. 3–5. Sceptre in front of forearm.

**R. 6:** Head more dome-shaped than on R. 1 and 4: frontal eye less narrow. Probably a later work of Copenhagen master. A 9

\* (a) Oxford = Seltman, *Greek Coins*, pl. 13, 8. ↓ 2.93

*Obv.*: what seems to be eagle's lowered head is l. wing below body; what seems to be l. wing in perspective is its neck; l. wing on die filled in at striking.

(b) Cambridge (McClean 6920, pl. 234, 4). → 3.06

*Obv.*: flaw between l. hand and head, and at back of l. knee.

*Rev.*: flaws below neck, at back of head near rho, and at top of rho: eyelids almost filled in.

10. **O. 7:** Same die.

**R. 3:** Same die.

\* (a) Leningrad 10058. → 3.01

*Obv.*: flaws as in 9(b).

*Rev.*: neck flaw increased; small flaw below rho.

11. **O. 8:** Larger; eagle more prominent.

**R. 6:** Same die.

(a) Athens (on exhibition).

(b) Berry. ↙ 2.97

(c) Forbat. ↑ 2.96

\* (d) Cambridge (*SNG* 3831). ↓ 2.73

*Rev.*: in all, flaws as in 9(b).

SECTION 2

12. **O. 8:** Same die.  
**R. 7:** Head in larger, coarser style; letters smaller. A 9  
 (a) Gans 1959, 794 = Naville XII, 1570.  
 \*(b)<sup>2</sup>Berlin (ex Imhoof-Blumer) = IB, pl. 7, 9. → 2.93  
*Obv.*: flaw between thigh and r. elbow.  
*Rev.*: flaws on nose, and tail of queue; flaw below neck on all.
13. **O. 9:** Similar to smaller scale of O. 7.  
**R. 7:** Same die.  
 (a) Athens 4476.  
 \*(b) Berlin (ex C. R. Fox). → 2.92  
 (c) Turin (Winterthur cast). 2.70  
 (d) Leningrad 10055. → 2.69
14. **O. 10:** Similar.  
**R. 7:** Same die.  
 \*(a) London (ex Earle Fox). ↘ 2.96  
 (b) New York (ANS). → 2.61 (worn)  
*Obv.*: flaws on nose and back of head on both; added flaw on l. shoulder in (b).  
*Rev.*: flaws at queue and nose on both.
15. **O. 11:** Better proportions; fold of drapery between legs.  
**R. 8:** Similar to R. 7 but finer, and letters as in section 1.  
 Finely beaded hair; necklace of round stones alternating with discs. A 9  
 \*(a) Boston (Cat. 1240). 2.98
16. **O. 12:** Smaller and inferior to O. 11.  
**R. 8:** Same die.  
 \*(a) London (*BMC Pelop.* 10, pl. 31, 15). ↑ 2.8  
 (b) Lambros (Winterthur cast). 3.05  
 (c) New York (ANS). ↑ 2.83  
 (d) Hamburger, May 1929, 321. 3.0  
*Rev.*: slight flaw on tail of queue in all; l. leg of alpha joins neck in (c).
17. **O. 13:** Similar to O. 11, but larger; posture more relaxed.  
 Eagle has both wings above body.  
**R. 8:** Same die.  
 \*(a) Berlin 28847. ↑ 2.93  
*Rev.*: flaws as in 16 (c).

<sup>2</sup> 12(b) was struck later in the section (during 14 ?). It is difficult to decide the order in which coins of R. 7 have been struck.



18. **O. 13:** Same die.  
**R. 9:** Smaller and in more advanced style. Hair in *krobylos*; beading not detectable. A 9  
 \*(a) London (ex Oman). ← 3.08  
*Obv.*: flaw above and below r. forearm; beard has coalesced with r. shoulder.
19. **O. 14:** Similar to small Zeuses of O. 3–5, but larger head.  
**R. 10:** Copy of R. 8. A 9  
 \*(a) Rhousopoulos (Winterthur cast).  
*Rev.*: flaws on brow and on top of head.
20. **O. 14:** Same die.  
**R. 11:** Close to R. 8; probably by same hand. A 9  
 (a) Bourgey, June 1959, 383 = Naville XII, 1571. 2.96  
 (b) Hirsch XXV, 1373. 3.02  
 \*(c) Hopper = Münz. u. Med. List 199, 17. ↑ 2.8  
 (d) Kricheldorf, Oct. 1957, 251. 2.79  
*Obv.*: in (a) and (b) flaw on l. of sceptre towards base; in (c) and (d) flaw on r. also.
21. **O. 15:** Finer and larger Zeus; good impression of threequarter view on torso.  
**R. 12:** Similar to R. 8, but by different hand; truncation inclined. A 9  
 \*(a) London (ex Weber 4282). ✓ 2.90  
*Rev.*: flaw above head and below neck.
22. **O. 16:** More vigorous style of Zeus. Throne with backrest and cross-stays as in Period II.  
**R. 12:** Same die.  
 \*(a) Lambros 1884 (Winterthur cast). 2.93  
*Rev.*: flaw above head more extensive.

*Obols of Sections 1 and 2*

23. **O. 17:** Similar to O. 3.  
**R. 13:** By same hand as R. 6. A 9  
 \*(a) Copenhagen (SNG 180). ↑ 0.97
24. **O. 18:** Zeus too large for obol flan. Similar to O. 15.  
**R. 13:** Same die.  
 (a) London (*BMC Pelop.* 8, pl. 31, 14) = IB, pl. 7, 11 (rev. only). ← 0.99  
 (b) Blackburn 6/15. ↑ 0.939  
 \*(c) Berlin (ex Prokesch-Osten). ↑ 0.94  
*Rev.*: flaws in front of eye and on top of head in all.

25.<sup>3</sup> **O. 19:** Similar to O. 13.

**R. 14:** Similar to heads of section 2, but coarser. A R

\* (a) Paris 251 = Babelon, *Traité* 1225, pl. 38,9. ← 0.98

(b) London (*BMC Pelop.* 12). ↘ 0.99

*Obv.*: flaw on head.

26. **O. 20:** Similar.

**R. 15:** Similar to large heads of section 2. A behind head; rho? at chin.

\* (a) Berlin (ex v. Rauch). ← 0.87

27. **O. 21:** Zeus' r. arm extended horizontally is a posture found in Period II, but throne is characteristic of I.

**R. 15:** Same die (?); necklace recut (?).

\* (a) Copenhagen (*SNG* 183). ↓ 0.92

28. **O. 22:** Probably by same hand as O. 13.

**R. 17:** Probably by same hand as R. 9. [A] ϣ

\* (a) New York (ANS). ↗ 1.00

### SECTION 3

29.<sup>4</sup> **O. 23:** Head of goddess to r.; beaded hair in queue.

**R. 17:** Zeus seated to r. in incuse square; eagle at l. hand sceptre in r. Similarity between Zeus' head and that of goddess suggests one engraver. Anepigraphic.

\* (a) London (*BMC Pelop.* 2, pl. 31, 11) = Babelon 1228, pl. 38, 12.  
↑ 2.96

30. **O. 24:** Zeus to l.; below l. elbow ϣ A.

**R. 18:** Head to r., set askew in incuse; hair in *krobylos*. A A  
K ϣ

\* (a) Münz. u. Med. List 199, 12 = Bourgey, June 1959, 384. 2.83

(b) Berlin 7659. ↖ 2.82

(c) Davis

(d) Naville XII, 1572 = Baranowsky IV, 609. 3.04

(e) Münz. u. Med. (in trade).

(f) London (ex Earle Fox). ↗ 2.99

*Obv.*: flaws below Zeus' r. hand and above eagle from (d); in (f) also flaw between r. shoulder and eagle.

*Rev.*: flaws below neck, above head, and between nose and rho in all; worse from (d).

<sup>3</sup> As the letter forms conform to section 3, this die combination may belong there.

<sup>4</sup> This is the only example of reversal of types. If the coin comes from an official mint, it ought to come very early in the series, but the folds of drapery suggest a later date (cf. p. 37, n. 126).

## Obols of Section 3

31. **O. 24:** Same die (here on obol flan).  
**R. 19:** Head to l. probably by same hand as R. 18.  $\Delta$  [R]  
 \*(a) Baldwin (in trade) = Lockett, *SNG* 2516.  $\nearrow$  0.97
32. **O. 25:** Zeus seated to r.; position on throne awkward. Beneath l. hand  $\Delta$   $\beta$ .  
**R. 20:** Similar, but to r. and hair in queue. Anepigraphic.  
 \*(a) Berlin (ex Prokesch-Osten).  $\nearrow$  0.94  
 (b) Berlin (ex Imhoof-Blumer).  $\rightarrow$  0.88  
 (c) London (*BMC Pelop.* 4, pl. 31, 12).  $\searrow$  0.93

## (Half-drachmas cont.)

33. **O. 26:** By same hand as obol die O. 25, but no ethnic; Zeus again to r.  $\times$   $\S$   
**R. 21:** Similar to R. 20.  $\Delta$   $\Delta$   
 (a)<sup>5</sup>Cambridge (McClellan 6922, pl. 234, 6).  $\uparrow$  3.01  
 (b) London (*BMC Pelop.* 3).  $\downarrow$  2.96  
 (c) New York (ANS).  $\swarrow$  3.06  
 \*(d) Berlin (ex Imhoof-Blumer).  $\uparrow$  2.88  
*Rev.*: flaw on head at base of kappa in (c), worse in (d).
34. **O. 26:** Same die.  
**R. 22:** Head to l., a poor copy of heads in section 1.  $\Delta$   $\beta$   
 \*(a) Copenhagen (*SNG* 165).  $\rightarrow$  2.99  
*Obv.*: flaws at Zeus' hip, in front of knee, and between arm and eagle.  
*Rev.*: flaws below and behind neck.
35. **O. 26:** Same die.  
**R. 23:** Head to l.; a close copy of R. 7 in section 2 (cf. profile of face, hair, position and form of letters).  $\Delta$   $\beta$   
 \*(a) Berlin 28847.  $\swarrow$  2.92  
*Obv.*: flaws worse.
36. **O. 27:** Zeus to l., imitating dies of sections 1 and 2.  
**R. 23:** Same die.  
 \*(a) London (*BMC Pelop.* 11).  $\leftarrow$  3.05  
 (b)<sup>6</sup>Leningrad.  $\leftarrow$  2.70
- <sup>5</sup> Grose misreads the  $\S$  as  $\phi$ .  
<sup>6</sup> The coin is in such poor condition that it is impossible to be certain that the dies are the same.

37. **O. 28:** Another imitation of Zeuses in sections 1 and 2.  
**R. 23:** Same die.  
 (a) Vienna. ↓ 2.6  
 \* (b) Berlin (ex Imhoof-Blumer). ← 2.96  
*Rev.*: flaw above head in both.
38. **O. 29:** Similar.  
**R. 22:** Same die.  
 (a) Münz. u. Med. VI, 696. 2.96  
*Obv.*: flaw between beard and shoulder.
39. **O. 30:** Similar, but finer.  
**R. 24:** Head to r.; hair in *krobylos* held by double band. Rho (?) at chin; alpha (?) above brow.  
 \* (a) Berlin (ex Imhoof-Blumer) = IB, pl. 7, 12. ↓ 2.895
40. **O. 30:** Same die.  
**R. 25:** An imitation of Corinthian-style heads, R. 17–20. Hair in *krobylos*. At top r. *Α*; bottom r. *Ι*.  
 \* (a) Lambros (Winterthur cast). 2.85  
 (b) Leu (ex Jameson 1269) = Hirsch XIII, 2756. 2.80  
 (c) Ars Classica XVI, 1299 = Hirsch XVIII, 2416. 2.85  
 (d) Naville I, 1918. 2.88  
 (e) London (*BMC Pelop.* 5) = Babelon, *Traité*, pl. 38, 8 (gives wrong ethnic). ↙ 2.76  
 (f) Cambridge (*SNG* 3835). ← 2.77  
*Obv.*: flaw on r. shoulder in all; flaw at l. shoulder from (b); flaw at l. elbow from (d).

*Coarse imitations of dies in this Period.*

41. **O. 31:** Zeus to l.; a creditable die.  
**R. 26:** Head to l. *Α Ι*  
 \* (a) Berlin 28686. ← 2.98  
 (b) Munich. ↘ 3.03  
 (c) Berry (*SNG* 857). ← 2.99
42. **O. 32:** Imitation of O. 25 (?).  
**R. 27:** Head to l.; hair in queue. Imitation of R. 7 (?). No letters visible.  
 \* (a) Oxford. ↑ 3.03  
 (b) Athens 1892–3, *ΛΑ* 27.  
*Rev.*: flaw on top of head in both.

43. **O. 33:** Similar.  
**R. 28:** Similar, but cruder.  $\Lambda \Re$   
 \*(a) Münz. u. Med. List 199, 18.
44. **O. 34:** Similar, but tail of drapery below seat, a characteristic rather of Period II.  
**R. 29:** Similar; markings in field might be remains of letters, but nothing legible.  
 \*(a) Copenhagen (Thorwaldsen 30). 2.5

## PERIOD II. ca. 477–ca. 468 B.C.

## CLEITOR MINT

## SECTION I

45. **O. 35:** Zeus to l. on throne with swan's head at top of backrest.  
**R. 30:** Wreathed head of goddess to r. (see pp. 4 ff.).  $\Lambda \Re \Re \Lambda$   
 \*(a) Boston (Cat. 1244). 2.95  
 (b) New York (ANS). → 2.87  
*Rev.*: flaws on and above head, and below neck in both.
46. **O. 36:** Similar  
**R. 30:** Same die.  
 (a) Paris 247 = Babelon 844, pl. 223, 16 (rev. only). ↗ 2.71  
 \*(b) London (ex Oman). ↓ 3.01  
*Rev.*: additional flaw between rho and upper lip.  
 (c) Münz. u. Med. List 249, 22. 2.89
47. **O. 37:** Similar; strands of hair fall down neck onto chest.  
**R. 31:** Wreathed head to l. of different style, incorporating some "Arcadian" features.  $\Re \Re \Re \Re \Re \Re \Re \Re$   
 \*(a) Berlin (ex Imhoof-Blumer) = Mainzer, *ZfN* 1926, pl. 6, 9. → 2.98  
*Rev.*: slight flaws between initial alpha and rho, and at bottom of queue.
48. **O. 38:** Similar to O. 36.  
**R. 31:** Same die.  
 \*(a) New York (ANS). ↗ 2.96  
*Rev.*: flaw between rho and alpha continues to head; another flaw between second alpha and delta.  
 (b) Paris 240 = Luynes 2308 = Babelon, *Traité* 842, pl. 223, 14 = IB 23, pl. 7, 17 (rev. only). ↑ 2.97  
 (c) London (ex Weber 4285). → 2.97  
 (d) Berlin 28686. ← 2.92  
*Obv.*: flaws at r. elbow and r. knee, slight in (b), worse in (c) and (d); chest damaged in (d).  
*Rev.*: slight flaw in front of lower lip in (c) and (d).

49. **O. 39:** Similar.  
**R. 31:** Same die.  
 \*(a) Vienna. → 2.93  
*Obv.:* flaws between eagle and shoulder, and behind neck.
50. **O. 40:** Similar, but larger; throne has cross-stays.  
**R. 31:** Same die.  
 \*(a) Boston (Cat. 1245). 3.07  
*Obv.:* flaw in front of knee.  
*Rev.:* flaws at first alpha worse.
51. **O. 41:** Very close to O. 38 (perhaps a recutting of it).  
**R. 31:** Same die.  
 \*(a) London (*BMCPelop.* 19, pl. 31, 18). ↓ 2.79  
*Rev.:* additional flaw on brow.
52. **O. 42:** Zeus to l. on throne without back.  
**R. 32:** Wreathed head of goddess to r. Letters on r. of head only, probably ARKA as in R. 30, of which this seems to be a copy.  
 \*(a) Athens 1892-3, KΘ 30. ↑

*Obols of Section 1*

53. **O. 43:** Similar to and probably by same hand as O. 40.  
**R. 33:** Wreathed head to l., similar to R. 30-1. OXID/ARKA  
 (a) New York (ANS). → 0.89  
 (b) London (*BMCPelop.* 20, pl. 31, 19). ← 0.82  
 \*(c) Berlin (ex Imhoof-Blumer) = Mainzer, *ZfN* 1926, pl. 6, 10 = Imhoof-Blumer, *Choix de monnaies grecques*, pl. II, 74. ← 0.89  
 (d) Naville I, 1921 = Babelon, *Traité* 843, pl. 223, 15. 0.91  
 (e) Athens 4478. ↓  
 (f) Leningrad 10061. ↓ 0.77  
*Obv.:* flaw between legs of throne in (f).  
*Rev.:* flaw above head in (a), but the three leaves of wreath visible; in (b)-(f) flaw extends over one leaf.

SECTION 2

54. **O. 40:** Same die (from section 1) recut.  
**R. 34:** Similar to R. 30-1, but lacks wreath: hair above band smooth, as in R. 30-1. IOXID/ARKA  
 (a) Cambridge (*SNG* 3832). ← 2.70  
*Obv.:* flaw at knee. Countermark (?) of uncertain design on l. arm.

- \* (b) Williams = Hamburger, June 1930, 261. ↓ 2.82  
*Obv.*: additional flaws between waist and r. elbow, and on tail of eagle.  
 Countermark (?) at r. hand.  
*Rev.*: flaw under neck; minor flaw on top of head.

55. **O. 38A**: Probably same die (from section 1) recut, particularly the chest, which was damaged in 48(d).

**R. 35**: Head of goddess to r. with hair in bun; the design is of the Tegea mint, but the style is "Arcadian"—small eye, weakly defined lids, large ear, pinched nose, thin neck.  
 ARK[ADIK] ON

- \* (a)<sup>7</sup> Naville XV, 823 = Hess, March 1918, 610 = Merzbacher, Nov. 1909, 3018. 3.05

56. **O. 41A**: Same die, recut and modernised with cross-stays to throne.

**R. 34**: Same die.

- \* (a) Berlin (ex Löbbecke). ↘ 2.93  
*Obv.*: flaw on wing of eagle.  
*Rev.*: flaws worse than in 54.

57. **O. 44**: Similar to O. 40.

**R. 6A**: Same die recut. Recutting chiefly concerned with the eye, which in R. 6 had almost disintegrated, the line of the nose, and tail of queue; flaw below neck partially removed, but small flaws at back of head and on top of rho left untouched.

- (a) Boston (Cat. 1241). 3.04  
 \* (b) Berlin (ex Löbbecke) = Regling, *MaK* 178. ↗ 3.09  
*Rev.*: small flaw on back of head above the old one; upper eyelid breaking again. These flaws deteriorate in following.  
 (c) Copenhagen (*SNG* 166). ↓ 2.89  
 (d) Oxford. → 2.93  
 (e) Paris 253. ↓ 2.42

58. **O. 44**: Same die.

**R. 6B**: Either another recutting of 6A or a new die imitating it.

- (a) Münz. u. Med. XIII, 1141. 2.97

59. **O. 44**: Same die.

**R. 34**: Same die.

- \* (a) London (ex Earle Fox). → 2.60  
*Rev.*: flaws more developed than in 56(a).

<sup>7</sup> Photo here larger than actual.

60. **O. 45:** Zeus beardless, but otherwise similar.  
**R. 36:** Similar to R. 34.  $\text{ARKA/DIKON}$   
 \*(a) Berlin (ex Imhoof-Blumer).  $\downarrow$  2.885  
*Rev.*: flaw across and above head; another below neck.
61. **O. 44:** Same die.  
**R. 37:** Head in “Arcadian” style—eye with thick lids not meeting at either corner.  $\text{IDAX/AR}$   
 \*(a) Berlin (ex Imhoof-Blumer).  $\downarrow$  2.76
62. **O. 46:** Similar but by different hand; longer neck and more slender torso.  
**R. 37:** Same die.  
 \*(a) Berlin (ex Löbbecke) = Lambros 1884 (Winterthur cast).  $\uparrow$  3.04  
 (b) Berlin (ex C. R. Fox).  $\rightarrow$  2.87  
 (c) Cambridge (SNG 3833).  $\downarrow$  2.89  
 (d) Berlin 259/1880.  $\nearrow$  3.05  
 (e) Münz. u. Med. List 199, 13.  
 (f) Paris 381 = Babelon, *Traité* 846, pl. 223, 18. 3.07  
 (g) Newcastle-upon-Tyne, ST 278.  $\nwarrow$  2.75  
*Rev.*: flaw under neck from (e); die in poor state in (g).
63. **O. 46:** Same die.  
**R. 38:** Similar, but coarser. Hair lined (not beaded) but forms a fringe on brow as in Period I. Ethnic almost illegible, but probably  $\text{ARKADI}$ .  
 \*(a) New York (ANS).  $\rightarrow$  2.68
64. **O. 46:** Same die.  
**R. 39:** Hair beaded and in style of Period I, but other details close to “Arcadian” style of R. 37.  $\text{AXXA/DIKON}$   
 (a) Paris 244 = Babelon, *Traité*, pl. 38, 11.  $\swarrow$  2.89  
 \*(b) Berlin (ex Imhoof-Blumer).  $\leftarrow$  2.89  
*Rev.*: flaw at tip of nose worse in (b) than (a); (a) also lacks the flaws above head and below neck.
65. **O. 46:** Same die.  
**R. 40:** Similar to last, but more archaistic, including the two large letters of Period I. The hair, and headband of gems are reminiscent of a bronze statuette in Athens (*BSA* 1925, pl. 25).  $\text{A}\mathfrak{A}$   
 \*(a) Berlin (ex Prokesch-Osten).  $\uparrow$  2.915  
 (b) Berlin (ex Imhoof-Blumer).  $\nearrow$  2.94  
 (c) Berlin (ex C. R. Fox).  $\searrow$  2.80  
*Obv.*: die worn.  
*Rev.*: flaw above head in all and below neck from (b).



66. **O. 47:** An imitation probably of O. 40.  
**R. 41:** A copy of R. 31 but lacking the wreath. R. 31 was linked with O. 40 (50) and it is this die-combination which the die-cutter has as a model.  $\text{I} \Delta \Lambda \chi \text{I} \Delta$   
 \*(a) Lambros 1884 (Winterthur cast). 3.07
67. **O. 48:** Perhaps an imitation of O. 46 (but cf. O. 59).  
**R. 42:** Perhaps an imitation of R. 40 with same position of letters.  $\Lambda \chi$   
 \*(a) Hamburger, April 1933, 797. 2.22  
*Obv.*: lyre countermark.  
*Rev.*: flaw on head.

*Obols of Section 2*

68. **O. 49:** Zeus to l. in style of O. 40 or O. 46.  
**R. 43:** Head to r. in "Arcadian" style. Two diagonal lines come down from behind the ear; they are unnaturally straight for strands of hair, but too long and in the wrong place for the ends of hairband. K or R in bottom r.; another letter top r.  
 (a) Paris 251b, perforated.  $\swarrow$  0.78  
 \*(b) Berlin (ex Imhoof-Blumer) = IB, pl. 7, 18.  $\swarrow$  0.86  
*Obv.*: flaw above l. arm.  
*Rev.*: flaw below neck in both; flaw above head in (b).
69. **O. 50:** Similar: close to obol obverse, O. 43, of section 1.  
**R. 43:** Same die.  
 \*(a) Munich.  $\rightarrow$  0.83  
 (b) Copenhagen (SNG 182).  $\downarrow$  0.85  
*Rev.*: both have flaw below neck; only (b) has flaw above head.
70. **O. 51:** Similar.  
**R. 44:** Similar, but better proportioned and lacks lines down neck; hair represented by large beads. Anepigraphic (?).  
 \*(a) Berlin (ex Imhoof-Blumer).  $\rightarrow$  1.01  
 (b) Berlin (ex C. R. Fox).  $\rightarrow$  0.95  
 (c) New York (ANS).  $\downarrow$  0.96  
 (d) Athens 4483.  $\rightarrow$   
*Obv.*: flaw behind leg of throne in (b); (c) and (d) worn.  
*Rev.*: flaw under neck from (c).
71. **O. 52:** Similar to O. 44.  
**R. 45:** Similar to R. 43-4.  $\text{DIKON} / [\text{ARKA}]$   
 \*(a) Berry (SNG 859)  $\rightarrow$  0.97

72. **O. 53:** Similar.

**R. 46:** Similar, but smaller. ΑΧ[ΑΑ]/ΔΙΚΟ

- (a) Paris 251a. ← 0.77
  - (b) Münz. u. Med. List 114, 25.
  - (c) Kricheldorf, Oct. 1955, 389. 0.72
- Rev.*: flaw above head in all.

# PERIOD II. ca. 477–ca. 468 B.C.

## TEGEA MINT

### SECTION I

73. **O. 54:** Zeus to l. on miniature scale. Hair in roll; two strands fall onto the chest. For throne cf. p. 41.

**R. 47:** Head to r.: for a description and discussion cf. p. 41. The engraver used tools of at least two sizes; a thicker one for upper lid, eyebrow, hairband, and letters, and a finer one for lower lid and hair. ΑRK

- (a) London (*BMCPelop.* 39, pl. 32, 5). ↙ 2.99
- Obv.*: graffito <ΑΓΟ>
- (b) Berlin (ex Löbbecke). ← 2.97

74. **O. 55:** Similar but inferior; hair in queue.

**R. 47:** Same die.

- (a) Basel 1908, 1831. ↓
- Obv.*: flaws between r. hand and knee, between r. biceps and side, and between l. side and backrest.

75. **O. 56:** Similar, but larger. Α Α

**R. 48:** Similar, but larger. Κ R

- (a) London (*BMCPelop.* 38). ↘ 2.93
- (b) Naville XII, 1575 = Lambros (Winterthur cast). 2.93

76. **O. 57:** Larger scale, style stiffer than O. 54 and threequarter view of chest not attempted. Throne has cross-stays, and backrest is a continuation of back leg.

**R. 49:** Similar; headband tied more convincingly. By same hand as R. 47–8. ΑΡΚΑ/ΔΙΚΟΝ

- (a) Athens 1Δ 7 (found on Mt. Lycaeus) = Kourouniotes, *Eph. Arch.* 1904, 170, fig. 5, 1.
- (b) Nanteuil 957 = Weber 4288 = Ciani, Dec. 1921, 67. 3.03

- \* (c) Berlin 260/1880. ↑ 3.035
  - (d) Salton-Schlessinger List 29, 47. 2.83
  - (e) Sotheby, Feb. 1909, 581. 2.915
  - (f) Berlin (ex Imhoof-Blumer). → 2.715
  - (g) Berlin (ex v. Rauch). ↑ 2.94
  - (h) Hirsch XX, 344. 3.04
- Rev.*: from (c) slight flaws between kappa and alpha, near delta and between second kappa and neck, which grow worse from (f): in (h) further flaw between omicron and nu.

77. **O. 58**: Similar; bunch of drapery does not extend so far on thigh; no strands of hair on chest.

**R. 49**: Same die.

- \* (a) Münz. u. Med. List 116, 148.
- Rev.*: flaws seem less developed than in 76(h).

78. **O. 58**: Same die.

**R. 50**: Similar, but probably copy of R. 49, and to l. (change of orientation not unexpected in a copy). Note that the short line just above the bun in R. 49 represented an iota; here iota is farther l. and the line perhaps is the tail of the band, but more likely copier has made a mistake.  $\text{NOKI}/\Delta\Lambda\chi\chi\Lambda$

- \* (a) New York (ANS). → 2.93
  - (b) Berlin (ex Prokesch-Osten). ← 2.85
  - (c) Sotheby, Feb. 1909, 582.
- Rev.*: in (a) and (b) there are flaws below neck and between rho and mouth: (c) has added flaws on back of bun and between second alpha and nose.

79. **O. 57**: Same die.

**R. 50**: Same die.

- \* (a) Copenhagen, K. P. 2236/22 = Naville I, 1920 = Naville X, 604. 2.93
- Rev.*: additional flaw above head.

80. **O. 57**: Same die.

**R. 51**: Poorer copy of R. 49 to r.  $\text{NOK}[I]/\Delta\Lambda\chi\chi\Lambda$

- \* (a) Cambridge (SNG 3843). ↓ 2.76

81. **O. 58**: Same die; face, particularly beard recut.

**R. 51**: Same die.

- \* (a) New York (ANS). ← 3.05
  - (b) Naville XV, 822 = Hirsch XXXII, 508. 3.00
- Rev.*: flaw on face in both.

SECTION 2

82. **O. 59:** Zeus to l. showing advances in the drapery, and in structure of throne legs (cf. p. 42).

**R. 52:** Another head by the Athens master.  $\text{ΝΟΧΙ/ΔΑΧΡΑ}$

- \* (a) Lambros 1884 (Winterthur cast). 3.07
  - (b) London (*BMC Pelop.* 36). → 2.93
  - (c) Münz. u. Med. (in trade).
  - (d) Jameson 1272 = Babelon, *Traité* 839, pl. 223, 11. 2.89
- Rev.*: flaw below neck in all; flaw on bun from (b).

83. **O. 59:** Same die.

**R. 48:** Same die; eye recut.

- \* (a) New York (ANS) = Feuardent, Dec. 1919, 285. → 2.36
- Obv.*: flaw at r. nipple.  
*Rev.*: flaw in front of neck.

84. **O. 60:** Another die of fine quality probably by same hand as O. 59. Here Zeus is not so long in the body and bends forward; heavier beard, and hair in queue.

**R. 52:** Same die.

- \* (a) Berlin. ↓ 2.82
  - (b) Naville V, 2246. 2.98
  - (c) Salton-Schlessinger (in trade). 2.87
- Rev.*: flaw on top of head in addition to those in 82.

85. **O. 60:** Same die.

**R. 53:** Similar to R. 52.  $\text{ΑΡΚΑ/ΔΙΚΟΝ}$

- \* (a) Naville VII, 1283 = Hirsch XVI, 592. 2.77
  - (b) Cambridge (*SNG* 3844). ↙ 2.68
  - (c) Glasgow = Macdonald II, pl. 39, 16. ↙ 2.68
- Rev.*: flaw under neck in all.

85 bis **O. 60:** Same die.

**R. 53 bis:** Close to R. 48.  $\text{ΑΡΚ[Α]}$

- \* (a) Proschowsky
- Obv.*: die in poor state.  
*Rev.*: flaws above head, below neck, on cheek and chin.

86. **O. 59:** Same die.

**R. 53:** Same die.

- \* (a) Frankfurt 1022. ← 2.90
- Obv.*: die wearing.  
*Rev.*: flaw below neck.

87. **O. 61:** Similar to O. 57–8 but more clumsy.  
**R. 54:** Similar, but more provincial in style, a copy of the Athens master's design. Koppa in ethnic. ΑΥΚΑ/ΚΙΡΟΝ  
 \*(a) Merzbacher, Nov. 1910, 580 = Hirsch XXV, 1383 = Photiades (Winterthur cast). 2.88
88. **O. 61:** Same die.  
**R. 55:** Another die by the Koppa master, but on smaller scale. ΑΥΚΑ/ΚΡΟΝ (no iota)  
 \*(a) Berlin 7/1887. ↓ 2.83
89. **O. 62:** Similar to preceding, but better proportioned.  
**R. 54:** Same die.  
 \*(a) Cambridge (SNG 3841). ↗ 2.95  
 (b) Cambridge (SNG 3842). ↑ 2.42  
 (c) London (BMCPelop. 30). ↘ 2.70  
*Rev.:* in (c) flaws below neck and on head.
90. **O. 62:** Same die.  
**R. 56:** Closer to dies of Athens master. [Α]ΥΚΑ/ΚΙΡΟΝ  
 (a) Copenhagen (SNG 176) = Hess, Jan. 1926, 291 = Egger, May 1912, 1145. ↓ 2.83  
 \*(b) Berlin (C. R. Fox). ↗ 2.88  
*Rev.:* flaws above head and on bun in both; flaw in front of nose on (b).
91. **O. 62:** Same die.  
**R. 52:** Same die.  
 \*(a) s'Gravenhage 4702. ↘ 3.00  
*Obv.:* foot of rear leg of throne flawed.  
*Rev.:* flaw above head, as well as on bun and below neck.
92. **O. 62:** Same die.  
**R. 53:** Same die.  
 \*(a) Copenhagen (SNG 175) = Feuarent 1895, 1658. ↑ 2.92  
*Obv.:* flaw at foot of throne worse.  
*Rev.:* additional flaw below chin, on, and near first alpha.
93. **O. 62:** Same die.  
**R. 55:** Same die.  
 \*(a) Paris (Expo. 814) = IB, pl. 7, 22 = Babelon, *Traité* 1231, pl. 38, 15. ↘ 2.94  
 (b) Bourgey, June 1959, 387 = Florange-Ciani List 1, 401. 2.87  
 (c) Athens 1891, Z1 124. ↗  
*Rev.:* flaw below neck in all three.

94. **O. 63:** Similar; larger than O. 62, but not so clumsy as O. 61.  
**R. 54:** Same die.  
 \* (a) Cambridge (McClellan 6924, pl. 234, 8). ← 2.87  
*Rev.*: flaws on head and below neck.
95. **O. 63:** Same die.  
**R. 55:** Same die.  
 \* (a) London (*BMC Pelop.* 31). ← 2.75  
*Obv.*: flaws on chest of eagle and in front of Zeus' legs.  
*Rev.*: flaw below neck.
96. **O. 60:** Same die.  
**R. 54:** Same die.  
 \* (a) Berlin 28782. ↖ 2.76  
*Obv.*: flaws under cross-stays of throne.  
*Rev.*: die in poor state.
97. **O. 64:** Similar to O. 61–3.  
**R. 57:** A competent copy of the Athens master's work in R. 47–8: the cutting of the eye with the thick upper lid and shorter thinner lower and beady pupil shows that an Arcadian engraver was at work. AR/KA  
 \* (a) Münz. u. Med. (in trade).  
*Obv.*: face and beard flawed.  
*Rev.*: flaw under neck.

*Obols of Sections 1 and 2*

98. **O. 65:** Similar to and probably by same hand as O. 55.  
**R. 58:** Head to r.; hair in bun; details obscure. [A]Λ4[A]  
 \* (a) Lambros (Winterthur cast).
99. **O. 65:** Same die.  
**R. 59:** Similar; details obscure.  
 \* (a) Oxford. ↗ 0.78
100. **O. 66:** Similar to and probably by the same hand as O. 61.  
**R. 60:** Similar to and by the same hand as R. 54–5, the Koppa master. ΠΟΡΙΔ/ΑΧΡΑ  
 \* (a) London (*BMC Pelop.* 32, pl. 32, 2) = Babelon, *Traité* 841, pl. 223, 13. ← 0.92  
 (b) Hirsch XIV, 475 = Rhousopoulos (Winterthur cast). 0.96

101. **O. 67:** Similar to O. 61-3.

**R. 60:** Same die.

- \* (a) Berlin 1173/1910 = Hirsch XXIX, 572. ← 0.94
  - (b) Cambridge (McClellan 6929, pl. 234, 13), cut. ↗ 0.93
  - (c) Leningrad 44-A664, perforated. → 0.88
  - (d) Berlin (ex Imhoof-Blumer) = IB, pl. 7, 23 (rev.). ↓ 0.90
- Rev.*: flaw on tail of koppa on all.

102. **O. 68:** By the same hand as O. 60.

**R. 61:** By the Athens master.  $\text{AR}\overline{\text{K}}/\text{A}\overline{\text{Q}}\text{I}$

- \* (a) Berlin (ex Prokesch-Osten). ↑ 0.96
  - (b) Winterthur (Bloesch, *Das Winterthurer Münzkabinett*, 1948-58, pl. II, 43). 0.87
  - (c) New York (ANS). ↓ 0.98
  - (d) Berlin 1174/1910 = Hirsch XXIX, 572. ↑ 0.95
  - (e) Copenhagen (SNG 188). ↘ 0.95
  - (f) Athens 1894, SE 164a. ↓
- Obv.*: flaw above eagle.
- Rev.*: flaw across eyebrow from (b).

103. **O. 69:** By the same hand as O. 54, but this throne has cross-stays.

**R. 61:** Same die.

- \* (a) Copenhagen (SNG 187). ← 0.96
- Rev.*: flaw on eyebrow is slight, so that this coin must have been struck before 102(b).

## PERIOD II. ca. 477-ca. 468 B.C.

### MANTINEA MINT

#### SECTION I

104. **O. 70:** Zeus seated to l.: for attributes and throne characteristics cf. pp. 42 ff.

**R. 62:** Head of goddess to r.; hair enclosed in *saccos* (cf. p. 43). Anepigraphic.

- (a) Boston (Cat. 1242). 3.03
  - (b) Munich = IB, pl. 7, 4 = Overbeck, *Griechische Kunstmythologie*, II, pl. II, 2 (obv.). ↓ 3.041
  - \* (c) Berlin 8/1887. ↘ 3.04
  - (d) Hirsch XXV, 1372.
  - (e) New York (ANS). ↑ 2.64
  - (f) Oxford. → 2.70
- Obv.*: flaw on head in (f).

105. **O. 71:** Similar, but lacking the precision of O. 70.  
**R. 63:** Similar, but lacks the sensitivity of R. 62.  $\Delta$  R  
 (a) Naville XII, 1574. 2.94  $\Delta$   $\lambda$   
 \* (b) Berlin (ex Imhoof-Blumer) = IB, pl. 7, 5.  $\searrow$  2.89  
 (c) Leningrad 10059.  $\uparrow$  2.79  
 (d) New York (Ward Coll.) = Hill, "Cat. of Ward Coll." no. 561. 2.92  
 (e) Berlin 1170/1910 = Hirsch XXIX, 571.  $\rightarrow$  2.96  
*Obv.:* flaw between eagle's upper wing and sceptre.  
*Rev.:* flaw under neck in all; (e) also has flaws under chin, on brow, and on loop of *saccos*.
106. **O. 72:** Similar, but Zeus' hair in long queue, and throne legs flare outwards at base.  
**R. 63:** Same die.  
 \* (a) London (*BMCPelop.* 25, pl. 31, 23).  $\leftarrow$  2.87  
*Rev.:* flaws as in 104(e).
107. **O. 71:** Same die.  
**R. 64:** Head to r. with hair in bun; a copy of R. 48 in the Tegea mint (cf. pp. 43f.).  $\lambda$  R  
 $\Delta$   $\Delta$   
 (a) Lambros (Winterthur cast). 2.90  
 (b) Hirsch XX, 346 = Hirsch XIII, 2767. 3.02  
 \* (c) Frankfurt 1021.  $\uparrow$  2.93  
 (d) Kricheldorf, May 1956, 1054. 2.56  
*Obv.:* die deteriorating along contour of Zeus' face and legs; in (c) die deteriorating along contour of face, arms, legs, back and sceptre, which is probably due to cleaning out, so that from the illustration it is difficult to see that the obverse is in fact the same as in 105, which has a different alignment on the plate.  
*Rev.:* flaw on kappa in all; flaw above head from (c).

*Obols*

108. **O. 73:** Zeus to l. not in the style of the preceding half-drachmas but of the early Tegean.  
**R. 65:** Similar to R. 63 and probably by the same hand; head in *saccos*.  $\Delta$  R  
 $\Delta$  K  
 (a) Munich.  $\uparrow$  0.987  
 \* (b) New York (ANS) = Lambros (Winterthur cast).  $\leftarrow$  0.95  
 (c) Berlin (ex Imhoof-Blumer).  $\leftarrow$  0.90  
*Obv.:* from (b) the line of the throne's seat and that of the groundline are extended in flaws.  
*Rev.:* flaw between rho and head from (b).



## SECTION 2

109. **O. 74:** Characteristic Mantinean obverse.

**R. 66:** Head to r., hair in bun; a copy of the developed dies by the Athens master; this provincial copier produces a version resembling that of the Koppa master, but among differences there is the use of K.  $\text{ΝΟΧ/ΙΔΑΧϺΑ}$

\* (a) London (*BMC Pelop.* 34, pl. 32, 3), perforated. → 2.95

(b) Boston (Cat. 1249) = Regling, *MaK* 318 = Babelon, *Traité* 860, pl. 223, 32. 2.959

*Obv.*: one leg of second kappa, faint in (a), fills in from (b); see R. 71 and p. 45.

110. **O. 75:** Similar to O. 74.

**R. 66:** Same die.

\* (a) Oxford. ← 2.79

*Obv.*: flaws between head and r. hand, and on face.

*Rev.*: slight flaw near nu.

(b) Munich (in poor state). → 2.902

111. **O. 76:** Zeus seated on throne with cross-stays—the design of the Tegea mint.

**R. 67:** Head in *saccos* to l. on smaller scale. Anepigraphic.

\* (a) Münz. u. Med. List 199, 15. 2.81

*Obv.*: slight flaw at junction of cross-stays.

112. **O. 75:** Same die.

**R. 67:** Same die.

\* (a) London (*BMC Pelop.* 27). → 2.67

(b) Oxford (in poor condition). → 2.50

(c)\* Pozzi (sic Babelon, *Traité* 859, pl. 223, 31, but not in Naville).

*Obv.*: flaw behind swan's head in addition to those in 110(a).

*Rev.*: slight flaws in field in front of face; and flaw below neck in (c).

113. **O. 76:** Same die.

**R. 66:** Same die.

\* (a) Hirsch XIII, 2761. 2.65

*Obv.*: flaw at cross-stays worse and contour deteriorating.

(b) Leningrad 10060. (In poor condition) ← 2.80

114. **O. 77:** Similar to O. 76.

**R. 67:** Same die.

\* (a) Naville VII, 1281 = Photiades (Winterthur cast). 2.65

*Rev.*: necklace cleaned out(?) and the two beads on r. recut.

\* Babelon mistakenly records the ethnic as **ARKA**.

- (b) Cambridge (SNG 3838), cut. ↖ 1.39  
 (c) New York (ANS) = Ratto, Nov. 1928, 485. → 2.69  
*Rev.*: necklace repaired again.  
 (d)<sup>9</sup>Kricheldorf, Feb. 1957, 1198.  
*Rev.*: slight flaw at upper lip from (b); flaw below loop of *saccos* from (c).

115. **O. 78**: Characteristic Mantinean obverse, but throne has cross-stays; die in too poor a state to assess quality; it continues in use with grossest flaws.

**R. 66**: Same die.

- (a) Kricheldorf, Oct. 1957, 252. 2.95  
 \* (b) New York (ANS). ← 2.76  
*Obv.*: countermark behind Zeus.  
 (c) London (*BMC Pelop.* 34). → 2.62  
 (d) Paris 255. ← 2.82  
 (e) Berlin (ex Löbbecke) = Lambros (Winterthur cast). ← 2.88  
*Obv.*: by (c) back of throne and sceptre have disappeared; flaws behind back, at r. hand, and at knee.  
*Rev.*: flaws at back of neck from (b); flaws below neck and behind bun from (c).

116. **O. 78**: Same die. A A

**R. 68**: *Saccos* head; a poor copy of R. 67. K P

- \* (a) Leningrad. → 2.73

117. **O. 79**: Characteristic Mantinean Zeus.

**R. 69**: Characteristic Mantinean goddess in *saccos*. Anepigraphic.

- \* (a) Berlin 347/1884. ← 2.83  
 (b) Münzhandl. Basel, March 1937, 321 = Schlessinger, Feb. 1935, 1022.

118. **O. 79**: Same die.

**R. 70**: *Saccos* head; a good copy of R. 69. Anepigraphic.

- \* (a) Berlin (ex Imhoof-Blumer) = Cahn, *Griechische Münzen archaischer Zeit*, 21. ↙ 2.89  
 (b) London (ex Weber 4289) = IB, pl. 7, 3 (obv.) = Imhoof-Blumer, *Choix de monnaies grecques*, pl. 11, 76. ← 2.75  
 (c) Bryn Mawr (Vermeule, *NC* 1956, pl. X, 109). → 2.83  
 (d) Hess, Feb. 1934, 373 = *Ars Classica* XVI, July 1933, 1300. 2.82  
 (e) Münz. u. Med. VIII, 832. 2.85

119. **O. 80**: Zeus to l. on standard Tegean throne; reflects Tegean O. 60, but lacks the drapery.

**R. 69**: Same die.

- \* (a) New York (ANS). ↓ 2.79

<sup>9</sup> Cat. gives **RKA** for the ethnic; there are slight flaws on l. of die, but no letters.

120. **O. 81:** Zeus to r. close to the preceding with standard throne.

**R. 67:** Same die.

\* (a) Williams. ↓ 2.72

(b) Berlin (ex Prokesch-Osten). → 2.72

*Rev.*: flaw below tassel worse; flaw in front of neck as well as below.

121. **O. 80:** Same die.

**R. 67:** Same die.

\* (a) New York (ANS). ↓ 2.66

(b) Grabow, July 1930, 426. 2.92

*Obv.*: flaws between eagle's tail and Zeus' r. shoulder, and at his l. shoulder.

*Rev.*: in poor state.

122. **O. 82:** Zeus to l. on standard throne. Eagle flies away from him with wings outspread (influence of the characteristic Mantinean) and is not perched at his wrist. Snake in the beak and talons of eagle.

**R. 68:** Same die.

\* (a) Berlin (ex Imhoof-Blumer). ↑ 2.87

(b) Copenhagen (SNG 172). ↓ 2.88

(c) London (*BMC Pelop.* 29, pl. 32, 1) = IB, pl. 7, 25 = Gardner, *Types of Greek Coins*, pl. 3, 16 (rev.). ↓ 2.88

*Obv.*: from (b) flaws below seat and on Zeus' queue; from (a) slight flaw on throne seat.

123. **O. 83:** By same hand as O. 82. No snake and no cross-stays to throne, but triangular corner of *himation* more prominent.

**R. 71:** Certainly a copy of R. 66, hair in Tegean bun (cf. p. 44).

ΟΛ/ΙΔΑΚΡ[Α]

(a) Berlin 28778. ← 2.81

\* (b) Berlin (ex Imhoof-Blumer) = IB, pl. 7, 24. ← 2.76

(c) Münz. u. Med. (in trade).

*Obv.*: flaw behind the throne across sceptre in all.

124. **O. 84:** Characteristic Mantinean in inferior style.<sup>10</sup>

**R. 72:** Head to r., hair in *saccos*. Anepigraphic.

(a) London (*BMC Pelop.* 26). ← 2.87

\* (b) Williams. ↙ 2.88

<sup>10</sup> Underneath the eagle (on both specimens; this is not an overstrike) there are straight lines running from the tail of the eagle in a two o'clock direction to the tip of the wing, where there is a cross-piece with a single line or handle running from it; underneath the eagle's tail two of the lines end in spikes. These lines seem to form a trident beneath the Zeus and the eagle; in other words it would seem that first a trident type was cut into the die, and then

125. **O. 85:** Zeus to r. in general style of characteristic Mantinean, but instead of a thunderbolt he holds an eagle with folded wings on his lap.

**R. 73:** Head in *saccos*. Anepigraphic.

\*(a) London (ex Lambros). ↑ 2.64

126. **O. 86:** Zeus to r. in the design of the Mantinean mint (less eagle), but the style is quite alien; cf. p. 9 for doubts about its authenticity.

**R. 74:** Head to left in alien style (cf. pp. 8 ff.). ARKA

\*(a) Paris (Cat. de Luynes 2307) = Babelon, *Traité* 1230, pl. 38, 13.  
↗ 2.97

### Obol

126 bis. **O. 86 bis:** Characteristic Mantinean Zeus, probably by same hand as O. 79. A

**R. 74 bis:** *Saccos* head in same style as R. 69.

(a) Kress 132, 178. o.98

## PERIOD III. ca. 468–ca. 460 B.C.

### CLEITOR MINT

#### SECTION I

127. **O. 87:** Standard Period II design in provincial style; probably related to O. 41A.

**R. 75:** Long-necked head in “Arcadian” style; eye frontal.  
ARKA/▷IKON

later, a Zeus type. If this had been so, it would have been an interesting confirmation of the theory that this coin was struck at Mantinea, for the trident was a Mantinea type, and it could be assumed that a discarded Mantinean trident die, when the mint was extremely busy, was recut for an Arkadikon die. Unfortunately there are difficulties in the way; there are more lines under the eagle and Zeus than can be explained by the trident alone; the trident is off-centre; the prongs of the trident in relation to their distance apart are longer than on the only early Mantinean trident that I have found (Babelon, *Traité*, pl. 226, 28). The trident theory could be saved only if a trident of the shape on this die and with letters or the like in the field on the right to put the trident off-centre could be found on a coin. The lines can hardly be unusually regular flaws, because on both specimens the lines seem to go under the Zeus type and not to continue across it as would be expected with a flaw.

- (a) Copenhagen (*SNG* 174). ↑ 2.88  
 (b) London (*BMC Pelop.* 15) = IB, pl. 7, 15. ↙ 2.89  
 \*(c) Berlin 28686. ↗ 2.78  
*Obv.*: flaw developing in front of face from (b), and on cross-stays in (c).  
*Rev.*: flaw on delta in all.
128. **O. 88**: Similar. Zigzag fold of drapery over thigh; lowbacked throne with legs turned out at right angles.  
**R. 75**: Same die.  
 \*(a) Athens 4477. →
129. **O. 89**: Similar to O. 87, but related to O. 44.  
**R. 76**: Hair done in bun and covered by *saccos*; features "Arcadian;" eye profiled.  $\text{NOX}|\text{A}\lambda\text{A}$   
 \*(a) Sotheby, July 1914, 10 = Ratto, April 1909, 3097. 3.01
130. **O. 90**: Similar, but more confident; heavy zigzag fold over thigh.  
**R. 76**: Same die.  
 (a) Oxford. ← 2.84  
 \*(b) London (*BMC Pelop.* 28, pl. 31, 24) = IB, pl. 6, 16 = Seltman, *Greek Coins*, pl. 13, 7. → 2.86
131. **O. 91**: Similar and still more competent; torso seems bare of drapery; eagle recalls Mantinean design.  
**R. 76**: Same die.  
 (a) Berlin (ex Prokesch-Osten). ↙ 2.94  
 \*(b) Berlin (ex C. R. Fox). → 2.91  
*Rev.*: slight flaw above omicron in both.
132. **O. 91**: Same die.  
**R. 77**: Neat head in more refined "Arcadian" style; semi-profiled eye (cf. p. 47).  $\begin{matrix} \text{A} & \text{A} \\ \text{X} & \text{q} \end{matrix}$   
 \*(a) London (ex Earle Fox). ↙ 2.97
133. **O. 91**: Same die.  $\text{A} & \text{A}$   
**R. 78**: By same hand; ear pointed.  $\text{X} & \text{q}$   
 \*(a) London (ex Lambros). ↗ 3.01  
*Obv.*: die more worn.
134. **O. 92**: Small and provincial; knobby knees.  
**R. 79**: By same hand as R. 77-8.  $\begin{matrix} \text{A} & \text{A} \\ \text{X} & \text{q} \end{matrix}$   
 (a) Naville V, 2245. 2.88  
 \*(b) Athens market.

135. **O. 92:** Same die.

**R. 80:** Long-necked head in "Arcadian" style; frontal eye.

ΑϞΛΛΔΙ

(a) London (*BMC Pelop.* 16). ↑ 2.81

\* (b) Berlin (ex Imhoof-Blumer). ↑ 2.96

*Obv.*: cross-stays deteriorating from (a); in (b) flaw above Zeus' head and behind eagle.

136. **O. 92:** Same die.

**R. 81:** Neat head showing influence of R. 77-9; eye profiled.

[A] A

[K] [R]

\* (a) Munich. ↓ 2.903

*Obv.*: extension of earlier flaws across whole die.

137. **O. 93:** Long-haired Zeus on throne without cross-stays, but set on statue base (cf. pp. 46ff.).

**R. 81:** Same die.

\* (a) Münz. u. Med. (in trade). = Kricheldorf, Nov. 1960, 119. 2.87

138. **O. 93:** Same die.

**R. 82:** Fine head with hair (done into *krobylos*) rendered in stippled fashion; for the *krobylos* cf. p. 46. <sup>K A</sup>  
[A] [R]

(a) Paris 246 = Babelon, *Traité* pl. 38, 14. → 2.79

(b) Stockholm (Smith Coll. 184) = Naville I, 1919 = Naville X, 603.

↙ 2.86

(c) Athens 4477a. ←

\* (d) Münz. u. Med. List 116, 150.

(e) Bourgey, June 1959, 385 = Svoronos, *JIAN* 1912, pl. Z, 37. 2.87

(f) Yale University. ↑ 2.86

*Obv.*: flaws under r. hand and in front of r. knee in all.

139. **O. 93:** Same die.

**R. 83:** Poor copy of R. 82. ΑϞΛΛΔΙ

\* (a) Berlin (ex C. R. Fox), perforated. ↑ 2.88

(b) New York (Ward Coll.) = Hill, "Cat. of Ward Coll." 560 (rev.). 2.77

140. **O. 94:** Zeus' arms bent to right angle; Period I type throne.

**R. 84:** Imitation of R. 77-9. <sup>A A</sup>  
R K

\* (a) Naville I, 1924 = Babelon, *Traité* 847, pl. 223, 20. 2.66

*Obol*

141.<sup>11</sup>**O. 95:** Similar to O. 89.

**R. 85:** Head to r. which may resemble R. 77-9. Letters of ethnic illegible.

(a) Ratto, Nov. 1928, 484.

\* (b) Copenhagen (Thorwaldsen 31). o.91

*Rev.*: flaw under neck in both.

## SECTION 1A

The following coins have no real points of contact with the preceding or the following section. By their style they probably belong to the Cleitor mint and have been arbitrarily included here.

142. **O. 96:** Zeus seated on standard throne with his left leg covering front leg of throne, a position rare early in the series.

**R. 86:** Head to r. in "Arcadian" style; hair above band smooth, of large beads below it; the four letters are illegible.

\* (a) Hirsch XIII, 2748 = Rhousopoulos (Winterthur cast). 2.38

143. **O. 97:** Similar.

**R. 87:** Head with strong regular features more archaic than "Arcadian" in style. AA

\* (a) Munich. 2.792

*Obols*

144. **O. 98:** Zeus to l. on throne with backrest but no cross-stays.

**R. 88:** Head to l.; hair in queue; rho and kappa of the four letter ethnic can be read.

\* (a) Berlin 1175/1910 = Hirsch XXIX, 572. ↑ o.82

145. **O. 99:** Zeus to l.; details obscure.

**R. 89:** Head to l.; hair in queue; no letters visible.

\* (a) Athens 1892, K 31.

146. **O. 100:** Similar.

**R. 90:** Similar.

\* (a) Lambros (Winterthur cast).

<sup>11</sup> The allocation of this obol to this mint is provisional.

## SECTION 2

147. **O. 101:** Similar to O. 93 in section 1. Backrest curves widely; no cross-stays.  
**R. 91:** Long-necked head in "Arcadian" style. Eye probably profiled.  $\text{NOXIC/A}\overline{\text{X}}\text{X}\text{A}$   
 (a) Naville I, 1925 = Babelon, *Traité* 852, pl. 223, 23. 2.92  
 \* (b) Cambridge (SNG 3834). ← 2.95  
*Obv.*: large flaw running from face, through eagle to knee.
148. **O. 102:** Similar in style to O. 101, but no backrest.  
**R. 91:** Same die.  
 \* (a) London (*BMC Pelop.* 13) = IB, pl. 7, 13 (rev.). ↘ 2.82  
*Obv.*: numerous flaws in field.  
*Rev.*: flaw at mouth.
149. **O. 103:** Frontal view of seated Zeus (cf. p. 47).  
**R. 91:** Same die.  
 \* (a) Berlin (C. R. Fox). ↘ 2.78  
*Rev.*: lips probably recut; flaw above nostril.
150. **O. 104:** Similar to O. 103, but knees higher.  
**R. 92:** Fine head in high relief (cf. p. 48).  $\text{ARKA/DIKOI}$   
 \* (a) 's Gravenhage 4703 = IB, pl. 7, 9 = Lambros, *Ἀναγρᾶφι*, pl. 13, 12. ↗ 2.75  
*Rev.*: all specimens have flaw below neck, but only this specimen is free from the flaw on head.  
 (b) Cambridge (McClean 6923, pl. 234, 7). ↘ 2.82  
 (c) Boston (Cat. 1250). 2.96  
 (d) New York (ANS). ↑ 2.99  
 (e) Naville V, 2243 = Ratto, April 1909, 3095. Regling, *MaK* 319. 2.86  
 (f) Pozzi (sic Babelon, *Traité* 853, pl. 223, 24 but not in Naville I).  
*Rev.*: major flaw on and above head; minor flaws on back of head and on queue from (b).
151. **O. 105:** Similar to two preceding: whole of l. leg of throne visible; smaller eagle.  
**R. 93:** Hair of goddess done in bun, but hair along brow in fringe.  $\text{IDAKAA/KOI}$   
 \* (a) Berlin (ex Imhoof-Blumer) = IB, pl. 7, 21. ↗ 2.97  
 (b)<sup>12</sup>Hess, Dec. 1931, 497. 2.91  
*Rev.*: the shape of nose changed slightly from concave (a) to a convex outline in (b) and after.

<sup>12</sup> This seems to be the same coin as that of the Winterthur cast under Klagenfurt. Hess Cat. gives the wt. as 2.29, but this is probably a misprint for 2.92; the wt. of the Klagenfurt coin is 2.91.



- (c) New York (ANS). ↗ 2.93  
 (d) Copenhagen (SNG 177). ↗ 2.84  
 (e) London (*BMC Pelop.* 35, pl. 32, 4). ↘ 2.92  
 (f) Blackburn 6/16. ↓  
*Rev.*: flaw above head in (f).

152. **O. 105**: Same die.

**R. 92**: Same die.

- \* (a) London (*BMC Pelop.* 14, pl. 31, 16). ↓ 2.94  
*Obv.*: die worn.  
*Rev.*: flaws worse than in 150.

### Obols

153. **O. 106**: Frontal Zeus.

**R. 94**: By same hand as R. 92. ARK/A

- (a) Cambridge (SNG 3837). ↘ 0.85  
 (b) New York (ANS) = Merzbacher, Nov. 1909, 3019 = Lambros  
 (Winterthur cast). ← 0.87  
 \* (c) Münz. u. Med. List 199, 14.  
*Rev.*: in all slight flaw above head and below neck.

154. **O. 107**: Similar, beard not so prominent.

**R. 95**: Similar, but this is an imitation of R. 92, whereas  
 R. 94 was by same hand as R. 92. A[RK]A

- \* (a) Berlin (ex Imhoof-Blumer) = IB, pl. 7, 20. ↘ 0.93

### SECTION 3

155. **O. 108**: Zeus in profile seated l. on throne with backrest but no cross-stays; eagle with extended wings flies away; design of Mantinean mint (cf. p. 48).

**R. 96**: Head in new style (non "Arcadian"), small and compact; frontal eye. ARKA

- (a) New York (ANS) = Hirsch XIV, 471. ↗ 2.96  
 (b) Jameson 1270 = Babelon, *Traité* 851, pl. 223, 22 = Hirsch XIII, 2755. 2.9  
 \* (c) Glasgow (Hunterian) = Macdonald II, pl. 39, 15. 2.94  
*Obv.*: countermark in form of lyre.  
*Rev.*: flaw below neck in all; slight flaw between ear and necklace in (a), more developed in (c); on (c) added flaw above head.

156. **O. 109**: Close to O. 108; differences are: l. forearm straight upright, not inclined to head; r. forearm slanting slightly downwards out of horizontal; eagle's wings smaller.

**R. 96:** Same die.

\* (a) Berlin 4280. ← 2.89

*Rev.*: flaw on neck worse than on 155(a) and (b), but less than on (c) and lacks the latter's flaw above head.

157. **O. 109:** Same die.

**R. 97:** Similar, but on larger scale. ARKA/DIKON

(a) Münz. u. Med. (in trade) = Gans List 29, 7198.

\* (b) New York (ANS). → 2.81

*Rev.*: flaw across hair slight in (a), extends across face in (b).

158. **O. 108:** Same die.

**R. 98:** Similar to and probably copy of R. 97. ARK[A]/DIKO

\* (a) Photiades (Winterthur cast). 2.94

*Obv.*: flaws behind and between legs of throne.

159. **O. 108:** Same die.

**R. 99:** Smaller head, slightly inclined; eye profiled, with upper lid longer than lower. ARKAD/IKON

\* (a) Berlin 17357. ↘ 2.86

(b) Münz. u. Med. (in trade).

160. **O. 108:** Same die.

**R. 100:** Similar, but larger nose. [A]RKAD/IKON

\* (a) Florange and Ciani, Feb. 1925, 471. 2.98

161. **O. 110:** Zeus to r. holding thunderbolt in r., sceptre in l. with eagle above.

**R. 100:** Same die.

\* (a) Paris 245 = Babelon, *Traité* 836, pl. 223, 8. ↗ 2.83

(b) New York (ANS). ← 2.82

*Rev.*: flaw at the bottom of iota in (a) and (b).

162. **O. 110:** Same die.

**R. 99:** Same die.

\* (a) Berlin (ex Löbbecke). → 2.82

(b) Hirsch XIX, 465. 2.9

*Rev.*: slight flaw at chin on both.

163. **O. 111:** Similar, but sceptre passes behind the knees; footstool.

**R. 99:** Same die.

\* (a) Berlin (ex Imhoof-Blumer). ↘ 2.91

(b) Boston (Cat. 1251). 2.79

(c) Copenhagen (SNG 173). ← 2.78

(d) New York (ANS), perforated. ← 2.93

Dies now in poor condition.

## Obols

164. **O. 112:** Similar to O. 108-9 and probably from same hand.

**R. 94:** Same die (from section 1).

\* (a) Berlin (ex C.R. Fox). ↖ 0.92

(b) Lambros (Winterthur cast).

*Rev.*: in addition to flaws in 153 there are flaws on tail of queue, and on alpha below chin; slight flaw on back of head above alpha; rho touching nose; flaw under neck more advanced. Flaws worse in (b).

165. **O. 113:** Similar to O. 110-1 (Zeus to r. with thunderbolt) and by same hand.

**R. 94:** Same die.

(a) Williams. ↖ 0.89

\* (b) Berlin (ex Prokesch-Osten). → 0.88

*Rev.*: flaws in both as in 164(b).

## SECTION 4

166. **O. 114:** Zeus to l.; legs and drapery covering front legs of throne; its backrest inclined sharply; small eagle; all in low relief (cf. O. 101).

**R. 101:** Similar to the heads in last section; eye profiled.

ΑΡΚΑ/ΔΙΚΟ

\* (a) Berlin (ex Prokesch-Osten). ↑ 2.775

(b) Basel 1908, 1830. →

167. **O. 115:** Similar; backrest upright.

**R. 102:** Head in heavier style; sterno-mastoid overemphasised and affects shape of truncation; eye profiled. ΑΡΚΑ/ΔΙΚΟ[N]

\* (a) Cambridge (SNG 3836). ← 2.82

168. **O. 115:** Same die.

**R. 103:** Hair in bun; copy of R. 48 in Tegea II, 2 including its frontal eye. ΑΡΚΑ

(a) Cambridge (SNG 3840). ← 2.83

\* (b) Oxford. ↖ 2.91

*Obv.*: flaw between drapery and seat of throne in all; seat of throne fills in from forward end gradually from (b).

(c) London (*BMC Pelop.* 37). ↖ 2.90

(d) Weber 4286 = Naville IV, 607. 2.91

(e) Paris (Expo. 815) = Babelon, *Traité*, pl. 223, 10. ← 2.87

*Obv.*: lyre countermark.

*Rev.*: flaws above head and at chin from (c).

169.<sup>13</sup>**O. 116:** Similar to O. 108–9 with larger eagle.

**R. 103:** Same die.

\*<sup>(a)</sup> Williams. ↖ 2.91  
*Rev.*: flaws worse.

170. **O. 116:** Same die.

**R. 104:** Features similar to R. 103, including prominent cheek-bone under temple, slightly receding chin and eye, but hair in queue. ♂ K

A [A]

(a) Kricheldorf, May 1926, 1053. 2.70  
 \*<sup>(b)</sup> Paris 254 = Babelon, *Traité*, pl. 223, 17. ↖ 2.94  
*Rev.*: flaw below neck.

171. **O. 117:** Similar to O. 116, and probably by same hand.

**R. 105:** Similar; again with frontal eye; a heavy copy of Mantinea III, 2. A A  
 K R

\*<sup>(a)</sup> Berlin (ex Imhoof-Blumer). → 2.89

172. **O. 118:** Zeus to r.; the unusual orientation and the position of r. hand suggests O. 110–I were the models.

**R. 106:** An “Arcadian” head to close the half-drachmas: the lidless eye, an oval rising out of a depression recalls the Arcadian statuette, Berlin 7644 (*BSA* 1925, pl. 25, 37). [A]⌘K A

\*<sup>(a)</sup> Berlin (ex Imhoof-Blumer) = IB, pl. 7, 14. ↘ 2.46

### Obol

173. **O. 119:** Similar to O. 116, but throne has cross-stays.

**R. 107:** Similar to R. 103, and probably by same hand (cf. same angular rho) A⌘A

\*<sup>(a)</sup> Copenhagen (*SNG* 186). → 0.91

<sup>13</sup> The evidence for this die combination depends, at present, on one specimen, which is undoubtedly a cast forgery. Its inclusion here is prompted by the belief that such a coin did exist as suggested by close study of the dies.

## PERIOD III. ca. 468—ca. 460 B.C.

## TEGEA MINT

## SECTION I

174. **O. 120:** Zeus seated to l.; standard design of mint.  
**R. 108:** Head to r.; hair in bun (cf. p. 22 for discussion).  
 NO[Χ:]ΔΑΧ[Α]  
 \*(a) Oxford. ← 2.96
175. **O. 121:** Standing Zeus, phiale in l.; eagle in r. (cf. p. 21 for discussion).  
**R. 109:** Copy of R. 108; eye frontal (cf. p. 51). NO[Χ:]ΔΑΧ[Α]  
 (a) Paris 250 = *RN* 1925, pl. II, 14. ↓ 2.91  
 \*(b) Berlin (ex C. R. Fox). ↖ 2.885  
 (c) Boston (Cat. 1243) = Babelon, *Traité* 858, pl. 223, 30 (obv.); pl. 223, 12 (rev.). Babelon mistakenly gives these two references to different coins. 2.94  
 (d) Berlin (ex Imhoof-Blumer) = IB, pl. 7, 7. ↓ 2.90  
 (e) Mavrogordato = Svoronos, *JIAN* 1912, pl. Z, 38. 2.84  
 (f) Cambridge (*SNG* 3850). → 2.82  
*Rev.*: from (a) flaws on bun, chin, and between rho and koppa; from (c) flaws developing on nose and in front of chin; from (d)–(f) chin flaw gradually becomes a full beard.
176. **O. 121:** Same die.  
**R. 110:** Frontal head of goddess; bun on r. ΑΡΚ[ΑΔΙΚ]ΟΝ  
 (a) Paris (Luynes 2311) = Babelon, *Traité* 857, pl. 223, 29 = Brett, *AJN* 1909, pl. 9, 9 (rev.). → 2.85  
 \*(b) London (*BMC Pelop.* 1, pl. 31, 10) = Babelon, *Traité* 1235, pl. 38, 18 = IB, pl. 7, 6 = Lambros, *Ἀναγραφή*, pl. 13, 10 = Regling *MaK* 316. → 2.79  
 (c) Berlin (ex Prokesch-Osten). → 2.80  
*Obv.*: Zeus' l. arm affected by flaws.
177. **O. 121:** Same die.  
**R. 111:** Obol die used on half-drachma flan; by same hand as R. 109; see 182 for die in good condition. NOΧ/ΙΔΑΧ[Α]  
 \*(a) Cambridge (McClean 6925, pl. 234, 4). ← 2.91  
*Obv.*: flaw on arm worse; flaw on neck.  
*Rev.*: flaw on top of head; necklace recut.
178. **O. 122:** Zeus seated to l. on throne with backrest, but no cross-stays; l. leg drawn back; rough die for this mint.  
**R. 110:** Same die.  
 \*(a) Modena (Winterthur cast). 2.89

179. **O. 122:** Same die.

**R. 112:** Threequarter head of goddess to r.; tassel of hair-band showing above bun. N/[O]XID/AXXA

- \* (a) Berlin 28847 = Regling, *MaK* 317. ↑ 2.87
- (b) London (ex Oman) = Lambros (Winterthur cast). ↗ 2.87
- Obv.*: flaw between thigh and r. arm in both.
- Rev.*: flaw under neck in (b).

180. **O. 55:** Same die (from Period II, 1).

**R. 113:** Similar; smaller. NOXID/AXXA

- \* (a) Paris 243 = Babelon, *Traité* 856, pl. 223, 28. ↙ 2.86
- (b) Williams = Lockett, *SNG* 2515 = Naville 1, 1928 = Babelon, *Traité*, pl. 223, 27 (rev.) ↙ 2.89
- Obv.*: die in very poor condition in both.
- Rev.*: flaw on mouth in both.

181. **O. 123:** Zeus seated to l. in style of Tegea II, 2; probably an old die recut.

**R. 114:** Threequarter head; eyes oblique; bun in threequarter perspective; by the Paris master. NOXID/[A]XXA

- \* (a) Paris (Expo. 816) = Babelon, *Traité* 1234, pl. 38, 17 = Brett, *AJN* 1909, pl. 9, 14 (rev.). ↑ 2.84
- (b) Berlin (ex Dannenberg). ← 2.78
- Obv.*: flaw on beard in (a); in (b) also in front of and behind head.
- Rev.*: flaw under neck in (a); in (b) also on chin and on nu.

### Obols

182. **O. 68:** Same die (from Period II, 2).

**R. 111:** Same die; used here before used on half-drachma flan.

- \* (a) Berlin 35/1886. ↑ 0.88
- Obv.*: flaw between Zeus' head and eagle worse.

183. **O. 124:** Similar.

**R. 115:** Profile head to r.; frontal eye with thick lids; linear engraving of neck. X [R]  
A A

- (a) London (ex Oman). ↓ 0.86
- (b) Berlin (ex Dannenberg). ↓ 0.70
- (c) Oxford. ↑ 0.86
- \* (d) New York (ANS). ← 0.83
- (e) Athens 1907-8, H 1. →
- (f) Copenhagen (*SNG* 185). ← 0.84
- Obv.*: vertical flaw across r. arm from (c). I have reservations about the allocation of this pair of dies to this mint.

184. **O. 125:** Similar to and by the same hand as O. 122.

**R. 116:** Head to r. in profile, but with tendency to threequarter.

ARKA

\*(a) London (*BMC Pelop.* 40). ↑ 0.939

## SECTION 2

185. **O. 126:** Back view of seated Zeus; buttocks bare.

**R. 117:** Threequarter head, similar to R. 114, and by the same hand (Paris master).  $\text{NOKID/}\Delta\text{K}\Delta\text{A}$

\*(a) London (acquired 1928). ← 2.88

186. **O. 126:** Same die.

**R. 118:** Similar to R. 113; closer to frontal.  $\text{NOKID/}\Delta\text{K}\Delta\text{A}$

\*(a) Naville XIII, 806 = Hirsch XIX, 466 = Brett, *AJN* 1909, pl. 9, 12 (rev.). 2.91

Photo larger than actual.

(b) Athens 4480.

*Obv.*: flaw above eagle.

187. **O. 127:** Similar.

**R. 118:** Same die.

\*(a) Münz. u. Med. List 116, 152 = Hirsch XXI, 2030 = Hamburger Nov. 1909, 772 = Brett, *AJN* 1909, pl. 9, 11. 3.0

Photo reduced.

188. **O. 128:** Similar; O. 126–8 probably by same hand.

**R. 117:** Same die.

\*(a) Proschowsky = ? Coin Galleries, March 1956. ← 2.86

189. **O. 129:** Back view in different style; buttocks covered; rear leg of throne curves into form of animal's foot.

**R. 119:** Finest of Paris master's heads.  $\text{NOKID/}\Delta\text{K}\Delta\text{A}$

\*(a) Boston (Cat. 1248). 2.91

*Obv.*: two countermarks of lyre, on face, and in front of head.

*Rev.*: flaw below neck.

## Obols

190. **O. 130:** Back view of Zeus with bare buttocks in style of half-drachmas O. 126–8.

**R. 120:** Threequarter head in style of R. 112.  $\text{NOKID/}\Delta\text{K}\Delta\text{A}$

\*(a) Berlin (ex Imhoof-Blumer). ← 0.93

191. **O. 130:** Same die.  
**R. 121:** Threequarter head, perhaps by Paris master.  
 NOXIQ/AXQA  
 \*(a) Aberdeen (SNG 214). ↘ 0.97
192. **O. 131:** Similar.  
**R. 121:** Same die.  
 \*(a) Copenhagen (SNG 189). → 0.93  
 (b) Yale University. ← 0.87  
 (c) Hirsch XIII, 2773. 0.95  
*Obv.*: flaw in front of Zeus' face.
193. **O. 132:** Similar but by same hand as O. 129.  
**R. 122:** Threequarter head by the Paris master.  $\begin{matrix} K & R \\ A & A \end{matrix}$   
 (a) London (ex Massey). ↖ 0.87  
 \*(b) Sotheby, April 1907, 175 = Brett, *AJN* 1909, pl. 9, 15 (rev.)  
 (c) Berlin (ex Prokesch-Osten) = IB, pl. 8, 3. ← 0.835
194. **O. 133:** Similar, by the same hand.  
**R. 122:** Same die.  
 \*(a) Copenhagen (SNG 190). → 0.88  
*Obv.*: flaw on eagle's tail.
195. **O. 134:** Zeus seated to l. in style of Period II.  
**R. 122:** Same die.  
 \*(a) Oxford. ↑ 0.79  
 (b) Munich. ← 0.87  
*Rev.*: die deteriorating.

### SECTION 3

196. **O. 135:** Similar to O. 126–8 but buttocks covered; Zeus leans slightly forward (upright in section 2).  
**R. 123:** Threequarter head; bun at rightangles—not in three-quarter as with Paris master. OXIQ/AXQA  
 (a) Boston (Cat. 1247). 2.67  
 (b) Cambridge (McClean 6927, pl. 234, 11) = Hirsch XIII, 2768. ↖ 2.9  
 \*(c) Berlin (ex Imhoof-Blumer) = Lambros 'Αναγραφή, pl. 13, 11. ↘ 2.96  
 (d) Naville XVII, 507 = Naville I, 1926 = Babelon, *Traité*, pl. 223, 25 (obv.) and 26 (rev.). 3.01  
 (e) Hess, Feb. 1936, 1064 = Grabow, July 1930, 427. 2.86  
 (f) Paris (Luynes 2312) = Babelon, *Traité* 1233, pl. 38, 16. ↗ 2.75  
 (g) Naville I, 1927 = Babelon, *Traité*, pl. 223, 26 (obv.), 27 (rev.). 2.82

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197. **O. 135:** Same die.  
**R. 124:** Similar. ΑΡΚΑ/ΔΙΚΟΝ  
 \*(a) Athens (on exhibition).
198. **O. 135:** Same die.  
**R. 121:** Same die (obol) used on half-drachma flan.  
 \*(a) Berlin (ex Ulrich Kohler). ↙ 2.85  
 (b) Berlin (ex Löbbecke). ↘ 2.76  
*Rev.*: it seems that all the obol specimens of this die precede the half-drachma specimens.
199. **O. 135:** Same die.  
**R. 125:** Similar to R. 124 but smaller. ΝΟΚΙΔ/Α[ΚΡΑ]  
 (a) Williams. → 2.999  
 \*(b) Berlin (ex Imhoof-Blumer). → 2.79  
*Obv.*: die in poor state.  
*Rev.*: flaw at chin, and bad flaw in front of face in both.
200. **O. 136:** Similar; l. elbow close to body.  
**R. 123:** Same die.  
 \*(a) Berlin 28686. ↘ 2.765
201. **O. 137:** Similar; sceptre not so close to throne and drapery higher around waist.  
**R. 123:** Same die.  
 (a) New York (Ward Coll.) = Hill, "Cat. of Ward Coll." 559 = Brett, *AJN* 1909, pl. 9, 10 (rev.). 2.82  
 \*(b) London (*BMC Pelop.* 43). ↘ 2.93  
*Rev.*: flaw across hair and down face.
202. **O. 137:** Same die.  
**R. 124:** Same die.  
 (a) Cambridge (*SNG* 3849). ← 2.87  
 \*(b) Jameson 1273 = Sotheby, April 1907, 174 = Brett, *AJN* 1909, pl. 9, 13 = Babelon, *Traité* 854, pl. 223, 25 (rev.) (Babelon gives to this rev. an alien obv., which is Pozzi 1926 [196d]) = Photiades (Winterthur cast). 2.96
203. **O. 136:** Same die.  
**R. 126:** Similar to O. 123. ΟΥΙΔ/ΑΚΡΑ  
 \*(a) London (*BMC Pelop.* 42, pl. 32, 6) = Gardner, *Types of Greek Coins*, pl. 3, 50 (rev.). ↘ 2.88
204. **O. 136:** Same die.  
**R. 127:** Similar. ΑΡΚΑ/ΔΙΚΟ  
 \*(a) Munich = Hirsch XIII, 2769. ↙ 2.927  
 (b) Münz. u. Med. List 116, 151.  
*Obv.*: too damaged for decision on die.  
*Rev.*: flaw under neck in both.

205. **O. 136:** Same die.  
**R. 121:** Same die (obol again).  
 \*(a) Berlin (ex Imhoof-Blumer). ↗ 2.835  
*Obv.*: flaw in front of leg in 204 and 205(a).  
*Rev.*: die in poor state.
206. **O. 136:** Same die.  
**R. 128:** Similar to R. 124. [A]RKA/DIKON  
 \*(a) Rhousopoulos (Winterthur cast). 2.90  
*Obv.*: die in bad state; leg of throne recut.

SECTION 4

207. **O. 138:** Similar, but the new engraver gives a better three-quarter rendering of Zeus' back. His r. leg is drawn back behind the front leg of throne, and there is an awkwardness about the planes at this point.  
**R. 129:** Similar, but more masculine; ends of hairband curl backwards. √ID/ΛΧΡΑ  
 \*(a) Vienna. → 2.89  
 (b) Copenhagen (Proschowsky). → 2.92
208. **O. 139:** Similar; r. arm horizontal; lower part of front leg of throne in lower plane than upper part.  
**R. 129:** Same die.  
 \*(a) New York (ANS). ← 2.85  
 (b) Hirsch XXXI, 435. 2.81  
 (c) Berlin (ex C. R. Fox). ← 2.97  
*Rev.*: flaws around bun; outline of neck at back has become straighter.
209. **O. 139:** Same die.  
**R. 130:** Almost identical, but hair behind ear, band around bun, modelling of neck different; ethnic identical, including second kappa.  
 \*(a) Cambridge (SNG 3848). ↖ 2.88  
*Rev.*: flaw under neck.
210. **O. 139:** Same die.  
**R. 131:** Almost identical, but hair behind ear, arrangement of hairband and modelling of neck different from preceding two. Ethnic identical.<sup>14</sup>

<sup>14</sup> The possibility of recutting or hubbing in connection with these three reverses (R. 129–31) must be borne in mind, but they have been kept apart as separate dies.

- (a) Schlessinger, Feb. 1935, 1024.  
 \*(b) Winterthur. 2.85  
*Obv.*: l. arm filled in; die in bad state.

211. **O. 140**: Full back view, not so competent.

**R. 131**: Same die.

- \*(a) London (ex Mavrogordato) = Hirsch XIV, 474 = Ratto, April 1909, 3096. ↘ 2.85  
 (b) Cambridge (SNG 3847), broken. ↑ 2.28

212. **O. 141**: Similar.

**R. 132**: Rounder head in threequarter view with smaller features. ARKA/RIKO

- \*(a) Berlin 319/1873. ↗ 2.90  
 (b) London (ex Lambros). ↘ 3.01  
 (c) Kricheldorf, May 1956, 1055. 2.85  
 (d) Weber 4287 = Naville IV, 609. 2.91  
 (e) Copenhagen (SNG 178). ↑ 2.93  
*Rev.*: flaw under neck and slight flaw at chin in all; flaw above head in (e).

213. **O. 142**: Similar.

**R. 133**: Similar. [A]PK[A]/ΔIKO

- \*(a) New York (ANS). ↘ 2.66

214. **O. 143**: Similar.

**R. 134**: Similar to R. 129 etc. [ARKA]ΔIKO

- \*(a) New York (ANS) = Ratto, April 1927, 1593. → 2.86

### *Obol*

215. **O. 144**: Back view of Zeus, probably by same hand as O. 138.

**R. 135**: Similar to R. 129. A/ΛQA

- \*(a) Blackburn  
*Rev.*: flaw on bun.

### SECTION 5

(of doubtful origin and position)

216. **O. 145**: Back view of Zeus seated to r.

**R. 136**: Threequarter head similar to R. 124. OXID/ΔKQA

- \*(a) Bourgey, June 1959, 388. 2.62 (Now Spink).

217.<sup>15</sup>**O. 146:** Front view of Zeus to l.; throne characteristic of Period I.

**R. 136:** Same die.

\***(a)** Boston (Cat. 1246). 2.41  
*Rev.*: flaw above head.

218. **O. 146:** Same die.

**R. 137:** Profile head to l.; hair arranged as in Mantinea III.

Frontal eye.  $\begin{matrix} \text{Я} & \text{K} \\ \text{A} & \text{A} \end{matrix}$

\***(a)** Hirsch XXV, 1376. 2.85

**(b)** Hirsch XVI, 594. 2.75

**(c)** Athens 484.  $\uparrow$

*Obv.*: flaw in front of shoulder on (c).

*Rev.*: flaw under neck in all three.

219. **O. 147:** Zeus in profile to l. seen from front. Design of Mantinea III, but inferior style.

**R. 138:** Threequarter head to r.; close copy of R. 129–131.

$\text{OXI}[\square]/\text{AKPA}$

\***(a)** Munich.  $\nwarrow$  2.66

220. **O. 148:** Crude seated Zeus to r.

**R. 139:** Barbarous imitation of the threequarter heads.  $\begin{matrix} \text{A} & \text{A} \\ \text{X} & \text{A} \end{matrix}$

\***(a)** Berlin (ex Prokesch-Osten).  $\rightarrow$  2.82

**(b)** Vienna = Hirsch XIII, 2772 = Hirsch XXV, 1381 = Hirsch XXXI, 434.  $\downarrow$  2.77

**(c)** Copenhagen (SNG 179).  $\uparrow$  2.95

*Rev.*: all have bad flaws above, below, and to r. of head.

## PERIOD III. ca. 468–ca. 460 B.C.

### MANTINEA MINT

#### SECTION I

221. **O. 149:** Similar to O. 83 in Mantinea II, 2, but throne has cross-stays.

**R. 140:** Head to l. by new engraver; hair, in fine wavy lines, taken along brow, down temple, and into queue; eye

<sup>15</sup> This is almost certainly the same coin as that of which there is a cast at Winterthur under Rhousopoulos, but the latter coin was given a wt. of 2.90.

open at inner corner; ear-ring of 5 stones, necklace of

larger ones.  $\lambda$   $\eta$   
A A

\*(a) New York (ANS).  $\nearrow$  2.77

(b) Athens 1904-5, H 43.

*Obv.*: flaws at l. shoulder and above head in (b).

*Rev.*: flaw between chin and alpha in (b).

221bis. **O. 149bis**: Similar but no cross-stays.

**R. 140**: Same die.

\*(a) Washington University.

222. **O. 81**: Same die (from II, 2).

**R. 140**: Same die.

\*(a) Cambridge (McClean 6921, pl. 234, 5) = Hirsch XIII, 2762.  $\rightarrow$  2.80

*Obv.*: flaw(?) in front of legs.

*Rev.*: flaw at chin extending onto face.

223. **O. 150**: Similar (no cross-stays), but eagle has both its wings above body at Zeus' wrist.

**R. 141**: Similar, but eye semi-profiled; upper eyelid extends

farther than lower; jewelry as R. 140. A A  
K [R]

\*(a) London (*BMCPelop.* 18) = IB, pl. 7, 26.  $\searrow$  2.79

224. **O. 151**: Similar to and by same hand as O. 150; eagle with folded wings.

**R. 141**: Same die.

\*(a) Forbat.  $\leftarrow$  2.84

225. **O. 152**: Similar, but throne has cross-stays; eagle's wings above body.

**R. 141**: Same die.

\*(a) London (ex Mavrogordato).  $\uparrow$  2.29

*Rev.*: flaws developing under chin and on nose.

### Obols

226. **O. 153**: Similar to half-drachma obverses in section 1.

**R. 142**: Similar to and by same hand as R. 141; eye semi-profiled. A P K A

\*(a) London (ex Oman).  $\uparrow$  0.92

= (?) Lambros (Winterthur cast) - wt. 0.88

(b) Copenhagen (*SNG* 184).

227. **O. 154:** Similar, but inferior.

**R. 142:** Probably same die with letters recut.

\*(a) Berlin 28847. ↓ 0.71

The style of the following two pairs of dies, one for a half-drachma, the other for an obol, bears no relation to this section; however, the obverse design of Zeus holding a thunderbolt to l. had been a characteristic of Mantinea in II (but the eagle perched on the backrest is reminiscent of the Aetna tetradrachm in Brussels: eagle perched at top of fir tree), and the goddess on the rev. wears a *saccos*, a characteristic of the mint in II, but the style seems over-archaic. The classification at this point is doubtful.

228. **O. 155:** Zeus to l.; thunderbolt in l.; eagle on backrest.

**R. 143:** Head in *saccos* to r.; frontal eye with thick, arched upper lid and thin, straight lower. Anepigraphic.

\*(a) London (ex Lambros). ↙ 2.98

(b) Athens 1900–01, K 11.

*Rev.*: flaw below neck.

### Obol

229. **O. 156:** Similar to O. 155.

**R. 144:** Similar to R. 143.

(a) Hirsch XX, 347 = Hirsch XIII, 2757. 0.87

\*(b) Münz. u. Med. List 199, 16.

### SECTION 2

230. **O. 157:** Zeus to l., similar to those of section 1, but smaller and better proportioned; eagle flying away with wings extended.

**R. 67:** Same die.

\*(a) Berlin (ex Imhoof-Blumer). ↗ 2.91

*Obv.*: small flaw in front of knee.

*Rev.*: die here in its worst state, after long life.

231. **O. 157:** Same die.

**R. 145:** Design as in section 1, but lines of hair thick and straight; nose-brow line straighter; eye frontal. ⋈ 9

[A] A

- (a) Schlessinger, Feb. 1935, 1023. 2.7  
 \*(b) London (*BMC Pelop.* 22, pl. 31, 20). ↗ 2.96  
 (c) Bourgey, June 1959, 386 = Ratto, Oct. 1924, 77. 2.90  
*Obv.*: flaw at knee more pronounced.  
*Rev.*: flaws above head, below neck and across neck from (b).

232. **O. 158**: Similar; by same hand; sceptre farther from throne, drapery different at legs.

**R. 145**: Same die.

- (a) New York (ANS). ← 2.69  
 \*(b) Berlin 1171/1910 = Hirsch XXIX, 371. ↙ 2.765  
 (c) Helbing XVII, 287 = Helbing, April, 1927, 1759. 2.85  
 (d) Munich. ← 2.786  
 (e) Copenhagen (Thorwaldsen 29). 2.86  
 (f) Copenhagen (*SNG* 168). ↑ 2.98  
*Rev.*: flaws worse and running across chin.

233. **O. 158**: Same die.

**R. 146**: Similar, but smaller and eyelids open at inner corner.

R K  
 A A

- \*(a) Berlin (ex Löbbecke). ↓ 2.81  
*Obv.*: flaws on chest and head.

234. **O. 157**: Same die.

**R. 146**: Same die.

- \*(a) Newcastle-upon-Tyne (S.T. 277).  
*Obv.*: flaw at knee worse.

235. **O. 158**: Same die.

**R. 147**: Similar, but inferior; copy of R. 146 with frontal eye.

[R] K  
 A A

- \*(a) Oxford. ↖ 2.79  
 (b) Kraay. ↖ 2.81  
*Obv.*: die in poor condition in both.  
*Rev.*: major flaw on and above head; another at chin.

236. **O. 157**: Same die.

**R. 147**: Same die.

- \*(a) Vienna. ↓ 2.9  
*Obv.*: die deteriorating.  
*Rev.*: flaw at chin extended across face.

237. **O. 159:** Similar, but l. arm higher; posture more relaxed; eagle horizontal.

**R. 148:** Similar to R. 146; eye semi-profiled. R K

(a) Boston (Cat. 1252). 2.77

A A

(b) Berlin (ex Imhoof-Blumer). → 2.995

\* (c) Berlin (ex von Gansauge). ↑ 2.91

(d) Münz. u. Med. VI, 697. 2.86

(e) de Nanteuil (pl. 58, 96) = Sotheby, Feb. 1884, 259 = Weber 4284 = Naville IV, 608. ↗ 3.01

*Obv.*: in all, small flaw above eagle's tail; on (b) and (c) defect on Zeus' chest, but it is repaired.

*Rev.*: flaw above head and at inner corner of eye in all.

238. **O. 159:** Same die.

**R. 146:** Same die.

(a) 's Gravenhage 4704. ↘ 2.8

\* (b) Robinson. ↓ 2.81

(c) New York (ANS). ← 2.80

(d) Berlin (ex Prokesch-Osten). → 2.86

*Obv.*: in all flaw between l. biceps and l. wrist; flaw at r. thumb and diagonal flaw across l. of torso from (d).

239. **O. 159:** Same die.

**R. 149:** Similar, but inferior. [R K]

\* (a) Naville I, 1923. 2.81

A A

240. **O. 159:** Same die.

**R. 150:** Superb head in same design; eye profiled.

A A  
R K

(a) Glasgow (Hunterian) = Macdonald, p. 156, 2. 2.96

(b) Winterthur. ← 2.82

(c) Athens (on exhibition).

\* (d) Münz. u. Med. List 199, 19 = Lockett, *SNG* 2512 = Hirsch XXII, 232 = Naville I, 1922 = Babelon, *Traité*, pl. 223, 19 = ? G. Hirsch, Dec. 1959, 232. ↑ 2.83

(e) Blackburn (6/14) = Sotheby, May 1916, 382.

(f) New York (ANS). ↑ 2.78

(g) London (*BMC Pelop.* 17, pl. 31. 17). ↑ 2.92

(h) Leningrad 10056. ← 2.71

(i) Paris 248. ↘ 2.92

(j) Turin (Museo Civico 22685). 2.54

(k) Copenhagen (Thorwaldsen 28). 2.87

(l) Berlin (ex Prokesch-Osten). ↗ 2.77

*Obv.*: gradual deterioration in state of die, particularly near l. arm.

*Rev.*: small flaw on top of head in all except (a); flaw below neck on (k) and (l).



241. **O. 160:** Similar.

**R. 151:** Similar but by different hand; eye profiled but narrower

than R. 150.  $\begin{matrix} \lambda & \eta \\ [A] & A \end{matrix}$

\* (a) Copenhagen (SNG 167).  $\downarrow$  2.90  
*Rev.*: flaw under neck.

# PERIOD IV. ca. 462/0-ca. 428 B.C.

## MANTINEA (Sole Mint)

### SECTION I

242. **O. 150:** Same die (from III, 1.).

**R. 151bis:** Head to r.; hair in roll, its disposition identical with that of R. 152; eye profiled; neck recut and shortened

in process.  $\begin{matrix} [A] & A \\ K & R \end{matrix}$

\* (a) Yale University.  $\rightarrow$  2.33  
*Obv.*: die worn; slight flaw behind head.  
*Rev.*: flaw below neck.

242bis. **O. 161:** Similar to obverses of III, 2—Zeus to l. on throne with swan's head backrest; no cross-stays; pointed fold of drapery over thigh; eagle flies away with extended wings.

**R. 152:** Similar to last; disposition of letters identical; eyeball more prominent than in last; style inferior to that of

R. 150.  $\begin{matrix} \Lambda & \Lambda \\ K & R \end{matrix}$

(a) London (ex Oman).  $\swarrow$  2.92  
 \* (b) Jameson 1271 = Sotheby, April 1907, 173. 2.86

243. **O. 161:** Same die.

**R. 153:** Similar, but finer.  $\begin{matrix} \Lambda & \Lambda \\ \lambda & R \end{matrix}$

(a) New York (ANS).  $\searrow$  2.85  
 \* (b) Berlin (ex C. R. Fox).  $\downarrow$  2.85  
*Obv.*: flaw between r. forearm and thigh.

244. **O. 162:** Similar.

**R. 153:** Same die.

(a) Boston (Cat. 1254). 2.90

\* (b) London (ex Armitage). ↗ 2.70

(c) Athens (on exhibition).

(d) Copenhagen (SNG 170). → 2.75

*Rev.*: flaws below neck, on roll and across hair from (a); from (c) flaws across brow and mouth.

245. **O. 162:** Same die.

**R. 154:** Similar.  $\begin{matrix} \Delta & \Delta \\ \nearrow & R \end{matrix}$

\* (a) Münz. u. Med. List 199, 20 = Lockett, SNG 2514 = Naville I, 1929 = Babelon, *Traité* 861, pl. 223, 33. 2.82

(b) Gans 1959, 793 = Naville XII, 1573. 2.66

(c) Williams = Glendining, Sept. 1962, 117. ↘

*Rev.*: flaw below neck in all; across jaw and on back of head in (c).

246. **O. 162:** Same die.

**R. 155:** Head to l.; hair in queue.  $\begin{matrix} \Delta & R \\ \Delta & K \end{matrix}$

\* (a) Berlin (ex Löbbecke). ↘ 2.91

(b) Berlin 37/1886. ↘ 2.81

*Obv.*: die wearing.

247. **O. 161:** Same die.

**R. 155:** Same die.

\* (a) Copenhagen (SNG 169) = Lambros (Winterthur cast) = Hirsch XXI, 2026 = Hamburger XI (1909), 771. → 2.89

(b) Munich. ↗ 2.94

*Obv.*: flaw as in 243.

*Rev.*: flaws under neck, through mouth and across face; worse in (b) than in (a).

248. **O. 161:** Same die.

**R. 156:** Similar to R. 155, but eyelids shorter, and rho under chin.  $\begin{matrix} [A] & \Delta \\ \nearrow & K \end{matrix}$

\* (a) Berlin (ex Imhoof-Blumer) = IB, pl. 7, 27. ← 2.85

*Obv.*: flaw as in 247.

249. **O. 163:** Similar; (a) resembles O. 164 when that is in poor state.

**R. 157:** Head to l. in *saccos*; profile eye; features similar to those of R. 155–6.  $\begin{matrix} \Delta & \Delta \\ R & K \end{matrix}$

\* (a) Leningrad 10057. ← 2.80

*Obv.*: Zeus' l. arm and contour of torso filling in.

250. **O. 164:** Similar. Zeus has moustache and short beard.

**R. 158:** Head to r. similar to R. 155-6, but nose larger; hair

in queue.  $\begin{matrix} \text{A} & \text{A} \\ \text{K} & \text{R} \end{matrix}$

\*(a) Hirsch XIV, 472.

(b) Hamburger, June 1930, 260.

(c) Budapest.

\*(d) London (ex Brookes).  $\uparrow$  2.89

*Obv.*: from (b) contours of design disappear and Zeus becomes a skeleton.

*Rev.*: in (b)-(d) flaws on nose and near back of hairband.

251. **O. 165:** Similar to O. 161-2; legs of throne "turned" with hour-glass type feet.

**R. 159:** Similar to R. 158; no ear-ring.  $\begin{matrix} \text{A} & \text{A} \\ \text{K} & \text{R} \end{matrix}$

\*(a) Münz. u. Med. X, 283. 2.79

(b) Naville V. 2244. 2.92

(c) Naville VII, 1284. 2.88

(d) Boston (Cat. 1253). 2.83

(e) New York (ANS).  $\rightarrow$  2.82

\*(f) Berlin 28686.  $\uparrow$  2.83

*Rev.*: all have flaw below neck; from (b) flaw on back of head; from (e) flaw in front of nose.

252. **O. 166:** Similar.

**R. 160:** Similar to R. 159.  $\begin{matrix} [\text{A}] & \text{A} \\ [\text{K}] & \text{R} \end{matrix}$

\*(a) Athens 486.  $\uparrow$

253. **O. 167:** Similar to O. 161-2, but more closely observed.

**R. 161:** Fine head to r.; hair in queue.  $\begin{matrix} \text{A} & \text{A} \\ \text{K} & \text{R} \end{matrix}$

\*(a) Berlin 319/1877.  $\uparrow$  2.75

(b) Munich = Hirsch XIII, 2759.  $\uparrow$  2.825

(c) Warren Coll. (Regling, 944). 2.84

254. **O. 168:** Similar, probably copy of O. 167.

**R. 162:** Head to r.; hair done up in bun and tied, but not in style of Tegea; lids of profiled eye barely visible.  $\begin{matrix} \text{A} & \text{A} \\ \text{R} & \text{K} \end{matrix}$

\*(a) Blackburn 6/17.



262. **O. 175:** Crude Zeus in design of Period II.

**R. 169:** Same die.

\*(a) Athens 485.

## SECTION 3

263. **O. 176:** Zeus to l.; die worn; leg of throne "turned."

**R. 170:** Threequarter head to r.; style more developed than in Tegea III.  $\text{I}\Delta/\text{A}\lambda\eta\alpha$

\*(a) Frankfurt 1023.  $\searrow$  2.48

*Rev.*: flaw on and above head.

264. **O. 177:** Similar to obverses of Period IV.

**R. 170:** Same die.

\*(a) London (*BMC Pelop.* 41).  $\leftarrow$  2.688

*Rev.*: flaw below neck as well.

265. **O. 177:** Same die.

**R. 171:** Profile head to l.; hair in *saccos*; similar to R. 157, but

with firmer chin.  $\begin{matrix} \text{A}[\text{A}] \\ \text{K} \end{matrix}$

\*(a) Münz. u. Med. List 199, 21. 2.44

*Rev.*: flaw on and above head.

266. **O. 178:** Similar to O. 177; this throne has cross-stays and knob on backrest; throne on O. 177 obscure.

**R. 172:** Similar to R. 158-9.  $\begin{matrix} \text{A} & \text{A} \\ \text{R} & \text{K} \end{matrix}$

\*(a) Berlin 1172/1910 = Hirsch XXIX, 571.  $\rightarrow$  2.215

*Rev.*: flaw under neck; slight flaw on hair.

*Obols of Section 1*

267. **O. 73:** Same die (from Mantinea II, 1).

**R. 173:** Similar to rolled hair heads of R. 152 ff. Anepigraphic.

\*(a)<sup>16</sup>Cambridge (SNG 3846).  $\rightarrow$  0.84

(b) Jameson 1274 = Babelon, *Traité* 864, pl. 223, 37. 0.97

*Obv.*: in poor state.

*Rev.*: flaw under neck.

<sup>16</sup> SNG incorrectly records ARK on l. of head.

268. **O. 179:** Similar to half-drachma obverses of section 1.  
**R. 174:** Head to l.; hair in queue, but no band or loop at temple.  
 QA  
 \*(a) London (ex Weber 4291) = Lambros 1885 (Winterthur cast).  
 ↗ 0.93
269. **O. 180:** Similar.  
**R. 174:** Same die.  
 (a) Cambridge (SNG 3839). ← 0.87  
 \*(b) Berlin (ex C. R. Fox). → 0.71  
 Rev.: flaw under neck in (b).
270. **O. 181:** Similar to O. 161 and O. 165 (Zeus beardless?).  
**R. 175:** Similar to R. 158–9; head to r. AR  
 \*(a) Berlin 518/1912 = Egger, May 1912, 1144. → 0.83.  
 (b) Berlin 9702. ← 0.853  
 Obv.: flaws around head.  
 Rev.: flaws above and below head.
271. **O. 181:** Same die.  
**R. 176:** Similar to R. 164: symbol behind neck: leaf and berry  
 of laurel or olive (cf. pp. 58f.). [AR]K  
 \*(a) Athens 4481a. ↑  
 Obv.: state of flaws around head suggest this was struck between 270(a)  
 and (b).
272. **O. 182:** Similar.  
**R. 177:** Similar to R. 162; ethnic obscure.  
 \*(a) New York (ANS). ↗ 0.90
273. **O. 183:** Zeus to l. bending forward.  
**R. 178:** Head to r.; hair in queue. A  
 \*(a) London (BMCPelop. 6). ↑ 0.92  
 (b) Copenhagen (SNG 181). 0.93  
 (c) Berlin (ex Prokesch-Osten). ↘ 0.945  
 Rev.: flaw above head from (b), which also breaks flat area around  
 incuse.

*Obol of Section 2*

274. **O. 184:** Back view of Zeus to r.  
**R. 179:** Head to r.; hair in queue. Ethnic difficult to read, but  
 abbreviated only by a single letter.  
 \*(a) New York (ANS). → 0.81

8

## SECTION 4

275. **O. 185:** Zeus to l. on throne without backrest; eagle with both wings above body.

**R. 180:** Fine head to r.; hair in roll. A R  
K A

\*(a) Berlin (ex Prokesch-Osten) = IB, pl. 7, 6 = Weil, *ZfN* 1882, pl. 2, 3  
= Seltman, *Greek Coins*, pl. 15, 13 = Seltman, *Olympia*, pl. 8, 9.  
↑ 2.83

276. **O. 186:** Less vigorous. Throne has backrest with knob on top matching knobs at junction of legs and seat.

**R. 180:** Same die.

\*(a) Berlin 36/1886. ← 2.48

277. **O. 186:** Same die.

**R. 181:** Head to r. in different style. Hair held by band. [A] R  
K A

\*(a) New York (ANS). ↘ 2.80  
*Obv.*: flaw above l. shoulder.

278. **O. 187:** Old-fashioned style of Zeus in Period II design.

**R. 182:** Head to r. in "Arcadian" style; eyelids in form of two crescents, their concave sides facing on either side of a beady pupil. ARKA

(a) Glasgow (Coates Coll. 3133).

\*(b) Münz. u. Med. List 116, 149 = Rosenberg, July 1932, 504 = Hirsch XXV, 1380 = Photiades (Winterthur cast). 2.87

(c) Lockett (*SNG* 2513). ↙ 2.72

*Obv.*: flaw above l. shoulder in all.

*Rev.*: flaw across face extending to rho in all.

279. **O. 186:** Same die.

**R. 182:** Same die.

\*(a) Helbing, April 1927, 1758. 2.87  
*Obv.*: flaws worse.

280. **O. 187:** Same die.

**R. 181:** Same die.

\*(a) Helbing, April 1927, 1760. 2.8

## SECTION 5

281. **O. 188:** Similar to O. 185; backless throne with pellet below the small abacus at top of front leg.

**R. 183:** Fine head to left similar to R. 180 (for hair cf. p. 62).

A R

A λ

- \* (a) Boston (Cat. 1253) = Regling, *MaK* 453 = Regling, *Warren* 946. 2.93
  - (b) Berlin (ex Imhoof-Blumer). ↓ 2.80 (Rev. = PLATE XIV, j)
  - (c) Paris (Luynes 2310) = Babelon, *Traité* 862, pl. 223, 34. ↑ 2.95
- Rev.*: major flaw below neck and minor on first alpha and top of head on (c).

282. **O. 189:** Probably similar, but in too poor a state for certain identification.

**R. 184:** Similar; same hair-style. A R

- \* (a) Tübingen 55.B5. ← 2.27 A K
- Rev.*: flaw below neck; mouth damaged.

283. **O. 188:** Same die.

**R. 185:** Similar, but more feminine; fine hair lines on nape; no knot (cf. p. 27). P A  
A K

- \* (a) Berlin (ex Imhoof-Blumer). ↘ 2.78
  - (b) Paris 382 (?) = Babelon, *Traité* 863, pl. 223, 36.
  - (c) Berlin (ex C. R. Fox). ← 2.95
- Obv.*: flaw in front of knee in (a), worse from (b).  
*Rev.*: from (b) shape of nose is coarsened, flaw on back of head from (c).

284. **O. 190:** Similar, but inferior; r. arm long and thin.

**R. 185:** Same die.

- \* (a) New York (ANS) = Grabow, July 1930, 426. ↘ 2.93
- Rev.*: flaw on back of head as in 283(c), but alpha and kappa recut.

285. **O. 190:** Same die.

**R. 186:** Similar, but spoiled by flaw on cheek near mouth which fills in lips. A R  
A K

- (a) Copenhagen (*SNG* 171). ↑ 2.70
  - \* (b) London (*BMCPelop.* 24, pl. 31, 22). ↗ 2.87
- Obv.*: (a) is in poor state and I am not certain of that die identification; probably (b) is recut.

285 bis. **O. 190:** Same die.

**R. 186 bis:** Head of goddess to r. The hair, cut in fine wavy lines, is taken along the brow and into a queue with a prominent tail. The ear-ring has the form of a cross.

[R K]

A A



(a) Williams.

*Obv.*: die now in poor state.

*Rev.*: small flaw on top l. of head.

286. **O. 191**: Similar to and perhaps by same hand as O. 188; l. leg completely covers front leg of throne.

**R. 186**: Same die.

\*(a) Athens 1904-5, 18 = Kourouniotes, *Eph. Arch.* 1904, 170, fig. 5, 2.

(b) Berry (*SNG* 858). ↖ 2.91

(c) Cambridge (*SNG* 3845). ↗ 2.91

(d) Proschowsky. ↘ 2.72.

*Rev.*: flaws on top of head and on back of head from (b).

287. **O. 191**: Same die.

**R. 187**: Head to l.; hair in *saccos*.  $\begin{matrix} \text{A} & \text{R} \\ \text{A} & \text{X} \end{matrix}$

\*(a) Münzhandl. Basel, 8, 322 = Hirsch XX, 345. 2.9

288. **O. 192**: Similar to O. 186.

**R. 188**: Head to r.; hair held by band; features similar to those of R. 185.  $\begin{matrix} \text{A} & \text{A} \\ \text{R} & \text{X} \end{matrix}$

\*(a) Ex Imhoof-Blumer (Cast at Winterthur). 2.77

289. **O. 193**: Similar to O. 185, but finer; backrest with knob.

**R. 189**: Head to r.; hair in roll (cf. p. 27).  $\begin{matrix} \text{A} & \text{P} \\ \text{A} & \text{K} \end{matrix}$

\*(a) Brussels (Hirsch Coll. 1373). ↖ 2.85 (PLATE XIV, m-n)

(b) Merzbacher, Nov. 1909, 3020 = Lambros (Winterthur cast) = G. Hirsch, June 1963, 412. 2.76 (PLATE XIV, k)

290. **O. 194**: Similar, but inferior, probably an imitation of O. 193, but far rear leg of throne shown in perspective; heads of Zeus and eagle too large.

**R. 190**: Head to l., showing influence of R. 189; hair combed along brow and under the roll as in Period V.  $\begin{matrix} \text{K} & \text{q} \\ \text{A} & \text{A} \end{matrix}$

(a) Stockholm (Hedenborg Coll.). ↖ 2.87

\*(b) 's Gravenhage 1957-636. ↑ 2.87

(c) Paris 256a. ← 2.87

*Rev.*: all have major flaw above head and minor on eye; (b) has flaw under chin which extends across face in (c).

291. **O. 194:** Same die.

**R. 191:** Smaller head to r. lacking nobility of preceding dies.

$\lambda$  A  
 A P

- \* (a) New York (ANS). → 2.90
- (b) Ciani, Nov. 1935, 150. 2.90

292. **O. 195:** Zeus to l. in different style; cross-stays and swan's head top to backrest—not visible in (b); torso in high relief.

**R. 192:** Head to r.; hair in bun; full ethnic. [A]PKAΔ/IKO[N]

- (a) Paris (Luynes 2309) = Babelon, *Traité* 837, pl. 223, 9. → 2.89
  - \* (b) New York (ANS) = Hirsch XVIII, 2417. ↑ 3.01
  - (c) Kricheldorf, Oct. 1955, 388. 2.29(?)
- Rev.*: all have flaws above and below head.

293. **O. 196:** A tall, stiff and angular Zeus on throne with low back.

**R. 193:** Competent copy of R. 190.
  $\begin{matrix} A & P \\ K & A \end{matrix}$

- \* (a) Paris (Expo. 817). ↗ 2.35
- (b) Naville I, 1930. 2.55

294. **O. 197:** Similar, but eagle flying towards not away from Zeus; throne of Period I type.

**R. 194:** Head to r.; hair in bun. Anepigraphic.

- \* (a) Berlin 7660. ↑ 2.93

295.<sup>17</sup> **O. 198:** Similar to O. 196–7, but cruder.

**R. 195:** Head to r. in crude style. APK/ΔIKON

- \* (a) Basel 1908. 1832. 2.30

### Obols of Sections 4–5

296. **O. 199:** Zeus on throne without backrest; similar to O. 186.

**R. 196:** Head to l.; hair in queue; eye profiled.
  $\begin{matrix} [A] & [K] \\ [R] \end{matrix}$

- \* (a) Berlin (ex Imhoof-Blumer). 0.69

297. **O. 200:** Similar to O. 194, but only one rear leg of throne visible.

<sup>17</sup> 295 is classified here based only on the superficial resemblance of the obverse to O. 196–7 and on the developed form of the letters on the reverse.

**R. 197:** Similar to R. 196, but in more affected style. Ear set too low.<sup>18</sup> [A] [9]

\*(a) Berlin (ex Imhoof-Blumer) = Imhoof-Blumer, *NC* 1895, p. 271; *Griechischen Münzen*, pl. I, 18 = Babelon, *Traité* 850, pl. 223, 21. o.66

Babelon supports Imhoof-Blumer's theory that the letters are the mark of an obol, but then calls the coin a tritartemoron.

298. **O. 201:** Similar to O. 200.

**R. 198:** Copy of R. 197; the ear has slipped down even farther. Probably alpha in front of brow, and an indefinite mark in front of neck.

\*(a) Cambridge (McClean 6928, pl. 234, 12). o.84

#### PERIOD V. ca. 428–ca. 418 B.C.

##### MANTINEA (Sole Mint)

299. **O. 202:** Similar to dies in Period IV; eagle has rounded wings (cf. p. 30).

**R. 199:** Hair along brow combed back under roll; head to r.

P K

A A

\*(a) Berlin 28399. ↘ 2.84

(b) Basel 1908. 1833 = IB, pl. 8, 8. ✓

*Rev.*: slight flaw between neck and chin in both.

300. **O. 202:** Probably same die.

**R. 200:** Similar and perhaps by same hand, but to l. P K  
A A

\*(a) Hirsch XIV, 473. 2.65

301. **O. 203:** Similar, but Zeus' l. arm farther from body.

**R. 201:** Similar; head to l. A P  
K A

\*(a) Münz. u. Med. List 199, 22. ↙ 2.8

<sup>18</sup> Imhoof-Blumer [cf. 297(a)] sees omicron in front of neck and delta in front of forehead; he argues that OΔ = OB = sign for an obol. If his reading is correct, the reason for marking the denomination seems hard to find in view of the many obols without the sign that have preceded 297–8, probably the last obols in the mint. However, it seems that the delta could be an imperfect alpha and the omicron the remains of a rho, the first two letters of the ethnic. The following reverse (R. 198) is clearly a copy of this die and has the remains of letters in the same positions. Grose deciphered them as alpha and rho and the letter in front of the head certainly seems nearer to alpha than to a delta.

302. **O. 204:** Similar.

**R. 200:** Same die.

\* (a) Munich. ↖ 2.88

*Obv.*: flaws around eagle and Zeus' face.

*Rev.*: flaw below, across, and behind neck.

303. **O. 204:** Same die.

**R. 202:** Head to l.: first of the "Phrygillan" dies (cf. pp. 29f.).

A P

K A

(a) London (*BMC Pelop.* 45, pl. 32, 8) = IB, pl. 8, 7. ↙ 2.98

(b) Berlin (ex Löbbecke) = Lambros (Winterthur cast). ↓ 2.84

(Rev.-PLATE XIV, q)

\* (c) Berlin 28847. ← 2.84

(d) New York (ANS) = Florange-Ciani List I, 402. ↖ 2.77

*Obv.*: flaws of 302(a) worse from (a).

*Rev.*: slight flaw at chin in (d).

304. **O. 205:** Similar; Zeus' body slimmer.

**R. 202:** Same die.

\* (a) Berlin 28778. ↖ 2.97

*Rev.*: flaw at chin worse.

305. **O. 206:** Similar; smaller eagle.

**R. 199:** Same die.

\* (a) Budapest.

*Rev.*: flaw running down face.

306. **O. 206:** Same die.

**R. 203:** Head to r. in *saccos*. P K  
A A

\* (a) Hirsch XIII, 2766. 2.92

*Obv.*: flaws in front of nose, between thumb and eagle, and generally in field.

307. **O. 207:** Similar, but Zeus' l. leg is forward, and r. slightly back.

**R. 203:** Same die.

\* (a) Münz. u. Med. List 169, 13.

*Rev.*: flaws at mouth, chin, and in front of nose.

308. **O. 208:** Zeus to l. on throne with backrest and curving leg (cf. p. 30).

**R. 204:** Similar, but to r.; hair held up by band. A K  
P A

\* (a) Berlin (ex Prokesch-Osten) = IB, pl. 8, 5 = Seltman, *Olympia*, pl. 8, 10. ↘ 2.90

309. **O. 208:** Same die.

**R. 205:** Another "Phrygillan" die (cf. p. 29); head to r.;

hair on brow covered by *ampyx*.  $\begin{matrix} A & P \\ K & A \end{matrix}$

\*(a) London (ex Earle Fox). ↗ 2.77  
*Obv.*: flaw behind Zeus' head.

310. **O. 209:** Similar to O. 202, but Zeus' l. leg not drawn back.

**R. 205:** Same die.

- \*(a) Kappeli (Cat. F. 41) = Jameson 1275 = Sotheby, April 1907, 172  
 = Münz. u. Med. X, 284. 2.86
- (b) London (*BMCPelop.* 44, pl. 32, 7) = Gardner, *Types of Greek Coins*,  
 pl. 3, 43 (*obv.*). ↑ 2.65
- (c) Berlin (ex Imhoof-Blumer). ↑ 2.915
- (d) New York (ANS). → 1.91  
 Dies in bad state.

311. **O. 209:** Same die.

**R. 204:** Same die.

- (a) Hirsch XX, 348 = Hirsch XIII, 2774. 2.89
  - \*(b) London (ex Weber 4290). ↙ 2.88
  - (c) Berlin (ex Imhoof-Blumer). ↙ 2.69
  - (d) Paris (Expo. 818). ← 1.80
- Obv.*: from (b) die rusted in front and behind Zeus' head.  
*Rev.*: from (b) flaws behind head developing; from (c) flaws over hair.

312. **O. 209:** Same die.

**R. 199:** Same die.

- \*(a) New York (ANS). ↘ 2.77  
*Obv.*: in poor state.  
*Rev.*: flaw down face worse.

### Plated Coins

The following plated coins of barbarous style are clearly influenced by the dies of IV and V.

313. **O. 210:** Zeus to l. on throne without back.

**R. 206:** Head to l.; hair in band; style provincial rather than

barbarous; copy of R. 162.  $\begin{matrix} A & K \\ P & A \end{matrix}$

- \*(a) London (*BMCPelop.* 23). ↑ 2.279

314. **O. 211:** Similar.

**R. 207:** Barbarous head to l.; hair in roll. A(?)

\* (a) London (*BMC Pelop.* 47). ↘ 2.39

### HALF OBOLS

For the types of the obols see p. 33. Nos 316 and 319–20, which are anepigraphic, have been attributed to Stratos in Acharnania by Imhoof-Blumer, and to Heraea by Babelon, but they resemble in style and design those half-obols which have an abbreviation of Arkadikon and may well belong to this series. The weights range between 0.50 and 0.36.

### Earlier

315. **O. 212:** Head of Zeus to l.; hair in queue; prominent beard.

**R. 208:** Head of Hermes to r. in cap; hair in queue; coarse style. A[R]K

(a) Paris 252 = Babelon, *Traité* 1226, pl. 38, 10. ↗ 0.39

\* (b) Berlin 512/1909 = Hirsch XXV, 1379. 0.44

316. **O. 213:** Similar

**R. 209:** Similar, but no ethnic visible.

(a) Berlin = Babelon, *Traité*, pl. 228, 2 = Imhoof-Blumer, *NZ* 1878, 160, 5; pl. 1, 24. ← 0.37

### Later

317. **O. 214:** Head of Zeus to r.; short hair.

**R. 210:** Similar.

\* (a) New York (ANS). ↓ 0.43

318. **O. 215:** Similar, but to l.; hair in roll.

**R. 211:** Similar, but cap more pointed. Aḡ

\* (a) Williams. ← 0.396

319. **O. 216:** Similar.

**R. 212:** Similar.

\* (a) Berlin (ex Imhoof-Blumer) = Imhoof-Blumer, *NC* 1895, pl. X, 6 = Babelon, *Traité*, pl. 228, 4. ↓ 0.50

320. **O. 217:** Similar.

**R. 213:** Similar.

(a) Berlin (ex Imhoof-Blumer) = Imhoof-Blumer, *NZ* 1878, 159, 4; pl. 1, 23 = Babelon, *Traité*, pl. 228, 3. ← 0.51



## CHARTS AND TABLES





## STYLISTIC PRÉCIS OF THE COINAGE

### *Key to Abbreviations*

In order to facilitate reference it should be noted that the typical features of a section or mint are printed in italics in the précis; thus a goddess with her hair done in a bun is most likely to come from the Tegea mint and a type C Zeus is confined to Mantinea II. Where a feature is typical of, though not necessarily exclusive to a section or mint, reference to that section is indicated in the key.

#### *Obverse*

Zeus A — Zeus seated to left, with sceptre in left hand, and right hand extended for eagle.

Zeus B — Back view of Zeus seated to right, with sceptre in left hand, and right extended for eagle (Tegea III).

Zeus C — Zeus seated to left, with thunderbolt in left hand, and sceptre in right (Mantinea II).

Zeus D — Zeus seated to right with thunderbolt in right hand, and sceptre in left (Cleitor III, 3).

Throne A — Throne with no backrest and no cross-stays (Period I when accompanied by archaic style; IV, 4-5 and V with developed style).

Throne B — Throne with backrest usually ending in a swan's head top, but no cross-stays.

Throne C — Throne with backrest usually ending in a swan's head and with cross-stays.

Throne D — Throne with knobs at junction of legs and seat (IV, 4-5).

#### *Reverse*

r — right.

l — left.

Q — Hair done in a queue.

K — Hair done in a *krobylos* (Periods I and II).

R — Hair done in a roll (Periods IV–V).

bun — Hair done in a bun at the back of the head (Tegea II–III).

saccos — Hair covered by a head-dress.

hair beaded — A technique characteristic of Period I.

laced — Hair held by a band passing several times around the head; this style is combined with the bun in the Tegea mint, but there the bun is the outstanding feature and the lacing is not noted; in Period IV the hair is laced without a bun or with an insignificant bun (Period IV, 1 and 4).

(1), (2) — The figure indicates the number of times that the form is found within the section and is used only in the case of rarities.

ARKA/DIKON — The ethnic may be found unabbreviated or sometimes abbreviated to the left of the oblique line. More than one oblique line would indicate the possibility of more than one abbreviation.

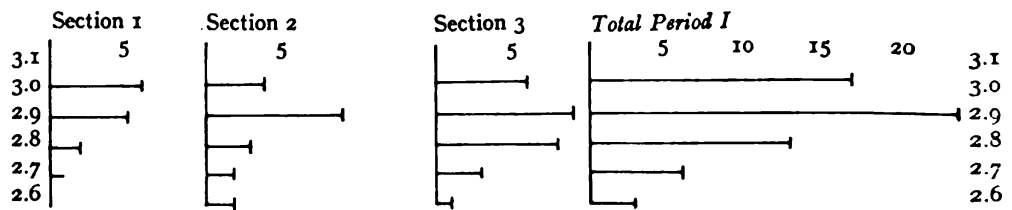


CLEITOR		TEGEA		MANTINEA	
Obv.	Rev.	Obv.	Rev.	Obv.	Rev.
Zeus A; throne A.	Head r; Q, K, hair beaded. AR	PERIOD I Section 1 Section 2 Section 3 PERIOD II Section 1 Section 2			
	Head r; Q, hair beaded. AR				
	Head r, l; K, Q, hair beaded. AR/KA				
Zeus A; throne B, C(2).	Head r, l; wreath; Q. ARKA/DIKON	Zeus A; throne B, C.	Head r; bun. ARK/DIKON	Zeus C; throne B.	Head r; saccos, bun (1); anep. ARKA
Zeus A; throne C.	Head r, l; Q, bun (1). AR/KADI/KON	Zeus A; throne C.	Head r; bun. ARKADIKON (Koppe)	Zeus C, A; throne B, C.	Head r, l; saccos, bun (2); anep. ARKA/DIKON
Zeus A; throne C, B.	Head r; Q, K (1), saccos (1). ARKA/DIKON	PERIOD III Section 1 Section 2 Section 3			
	Head r; Q, bun (1). ARKADIKON				
Zeus A, D; throne B.	Head r; Q. ARKA/DIKON	Zeus B; throne B.	Head 3/4; bun. ARKADIKON	Zeus A; throne B.	Head l; Q. ARKA

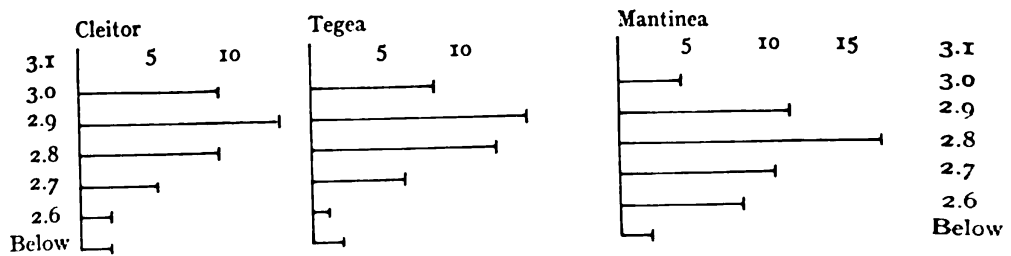
Zeus A; throne B.	Head r; Q, bun (1). ARKA/DIKON	Zeus B; throne B.	Section 4 Head 3/4; bun. ARKADIK	
		Zeus A, B; throne A, B.	Section 5 Head 3/4; bun; profile to 1; Q. ARKA/DIKON	
PERIOD IV				
			Section 1	Zeus A; throne B.  Head r, l; R, Q, laced, saccos. ARKA
			Section 2	Head r; R, Q, bun, saccos. ARKA/DIKON
			Section 3	Head 3/4, l; saccos, Q, bun. ARKA/DI
			Section 4	Head r, l; R, Q, laced. ARKA
			Section 5	Head r, l; R, bun, saccos. ARKA/DIKON
PERIOD V				
				Head r, l; R, saccos. ARKA

# HALF-DRACHMA WEIGHTS

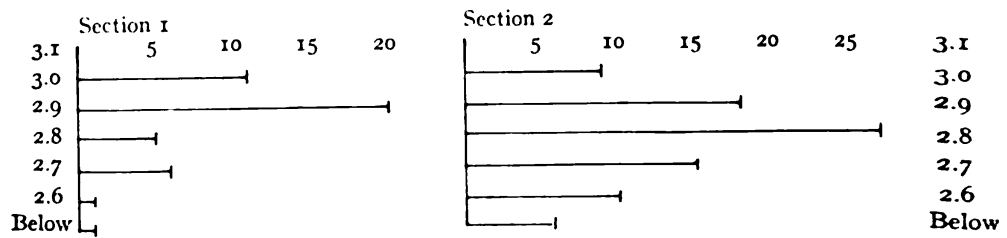
## PERIOD I



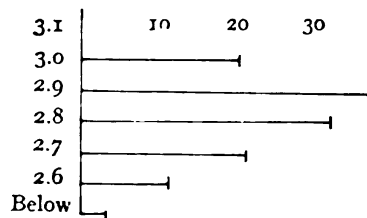
## PERIOD II



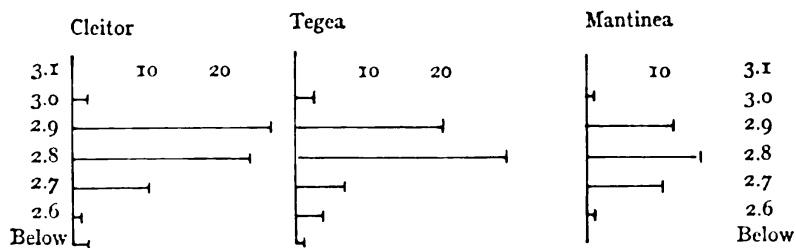
## Mints combined



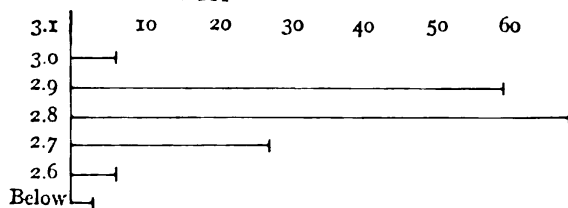
Total Period II



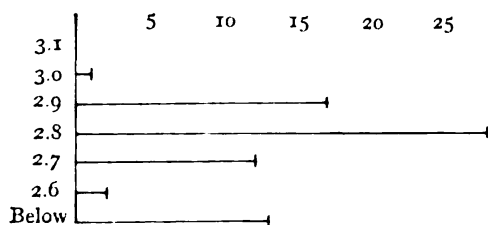
PERIOD III



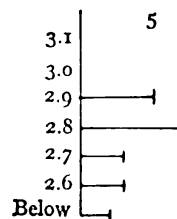
Total Period III



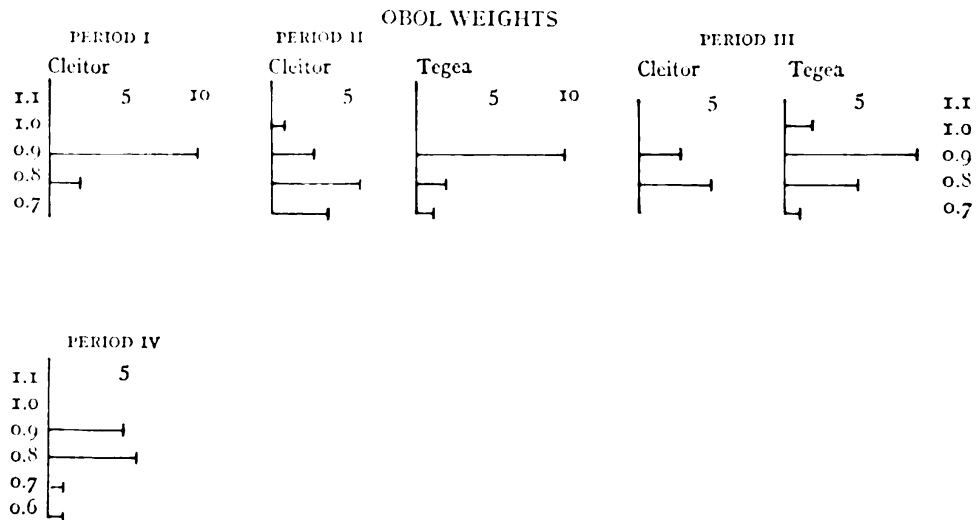
PERIOD IV



PERIOD V







### Notes on the Frequency Tables

#### PERIOD I

In no other Period is there such a large percentage of coins weighing 3.0 and over.

#### PERIOD II

In Period II the Cleitor mint, which had struck the coins of Period I, maintained a similar weight pattern during section 1, but if the overall pattern of Period II is taken into account in the individual mints there is little difference between Cleitor and Tegea. Mantinea's average weight is the lightest. In all mints there is a marked reduction in section 2, the period of greater activity.

#### PERIOD III

This Period shows the same relation between the mints, with best value at Cleitor, then Tegea and Mantinea again showing a greater percentage of its coins than the other mints below the overall average. In Periods I and II the greatest number of coins fell in the 2.9 range, but in Period III these fell in the 2.8 range and there was less chance of getting a coin of 3.0 or over.

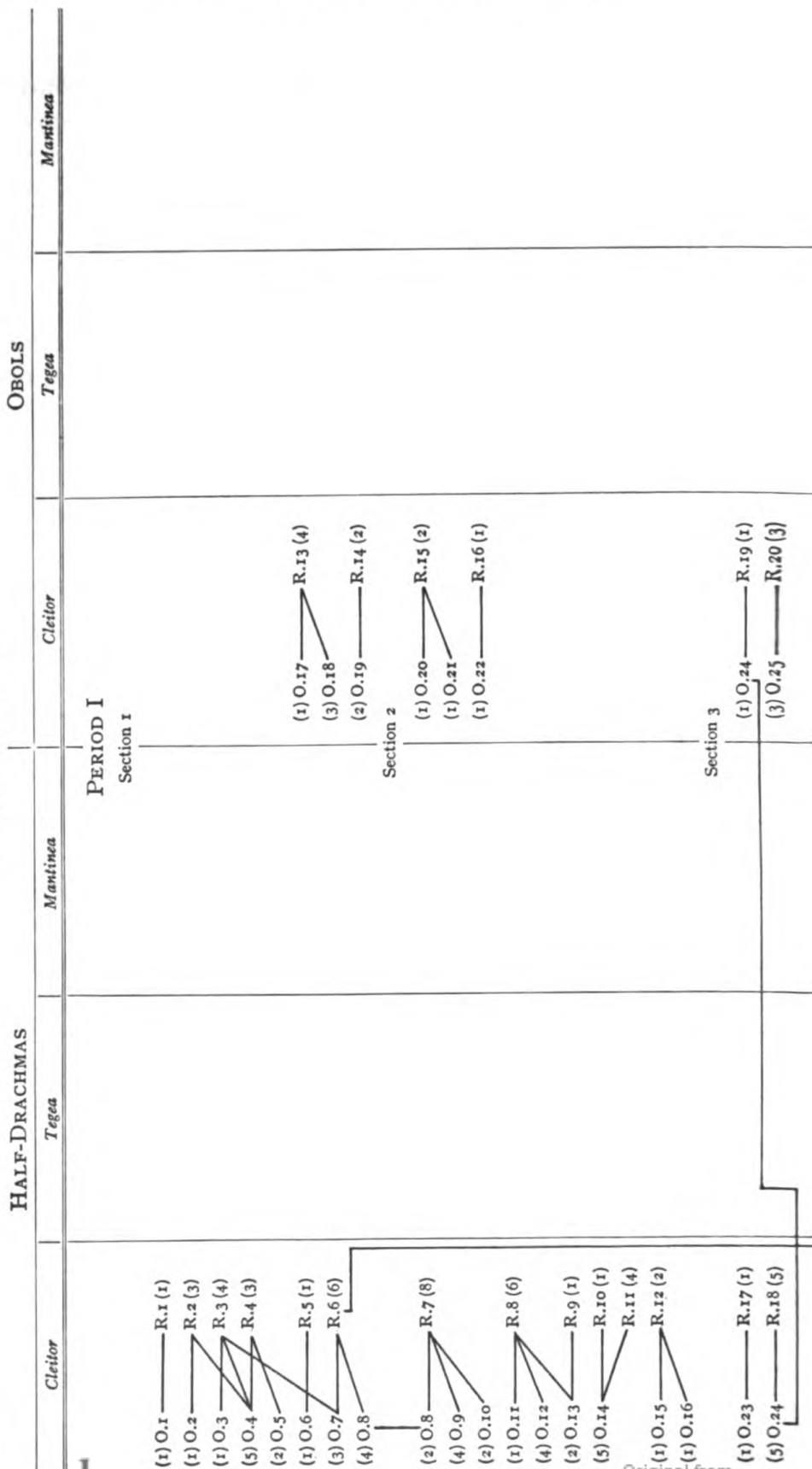
## PERIOD IV

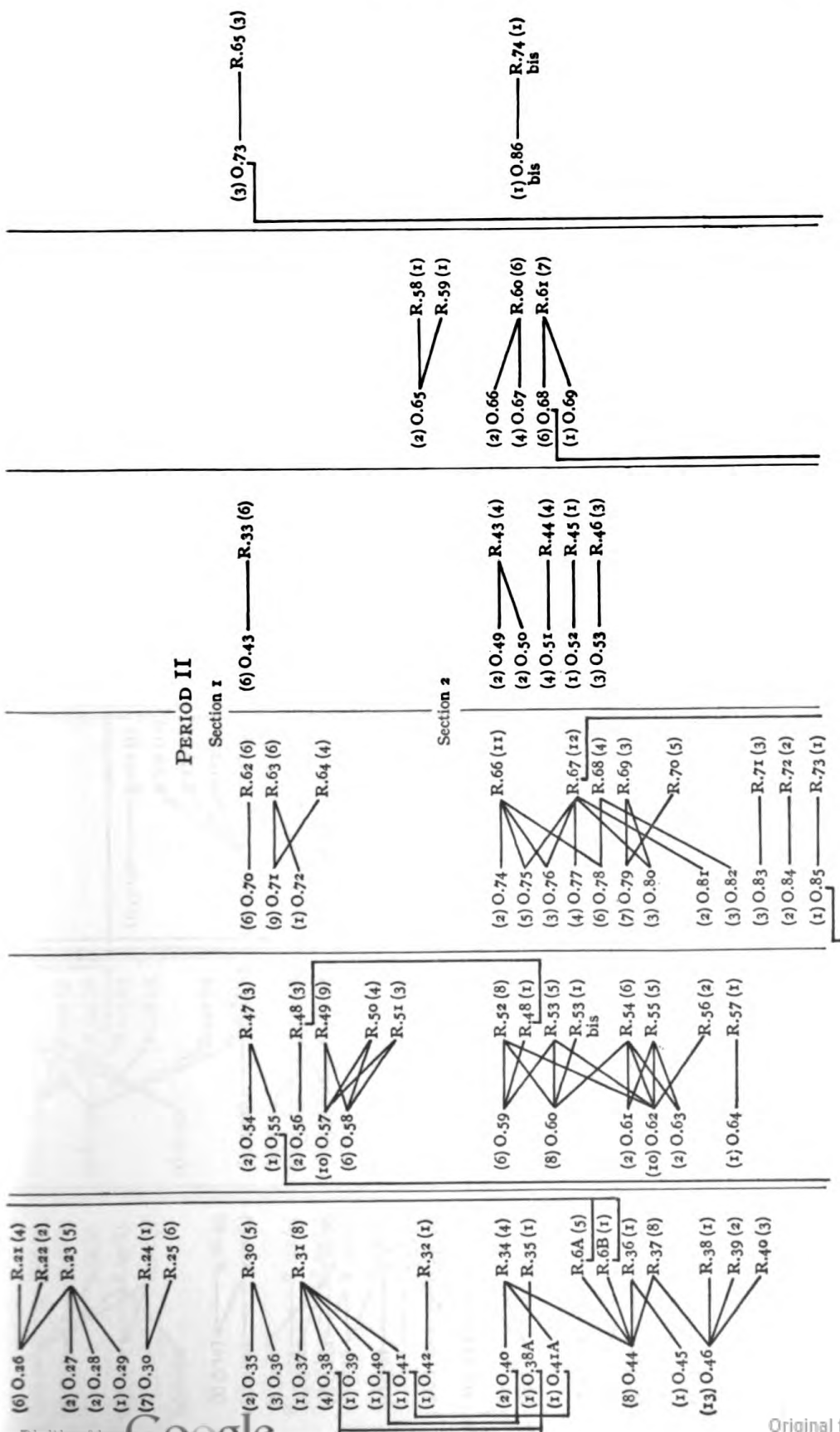
When Mantinea was the sole mint she seems to have continued with the same weight pattern that was seen in her mint in Period III, for there is a large percentage of low weight coins. One fact which does not come out in the table is that in section 5 there seems to have been an attempt to improve the weight standard.

## OBOLS

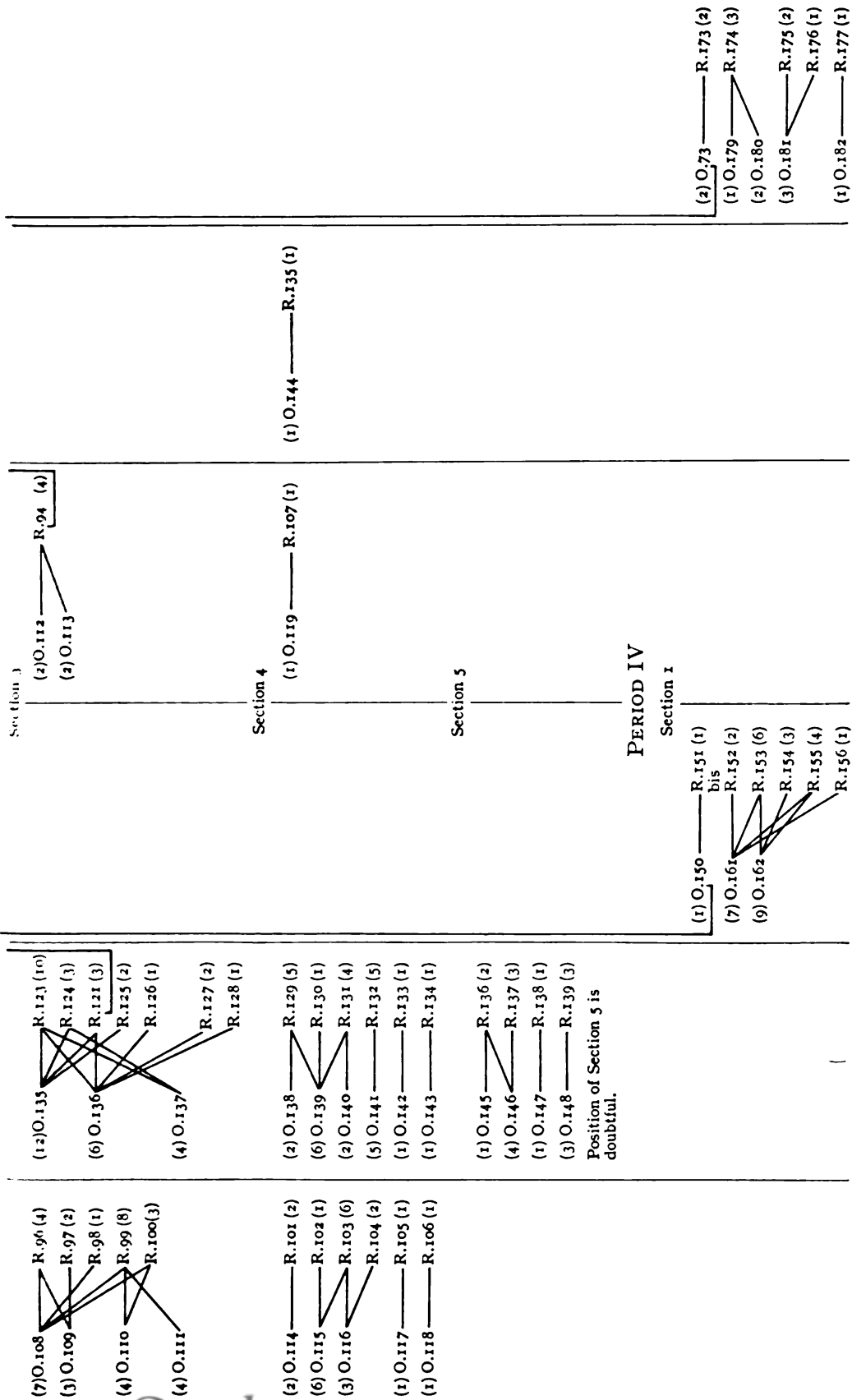
Mantinea struck too few obols in Periods II and III for tabulation. In this denomination Tegea maintained a better weight standard than Cleitor.

**DIE-LINKAGE**

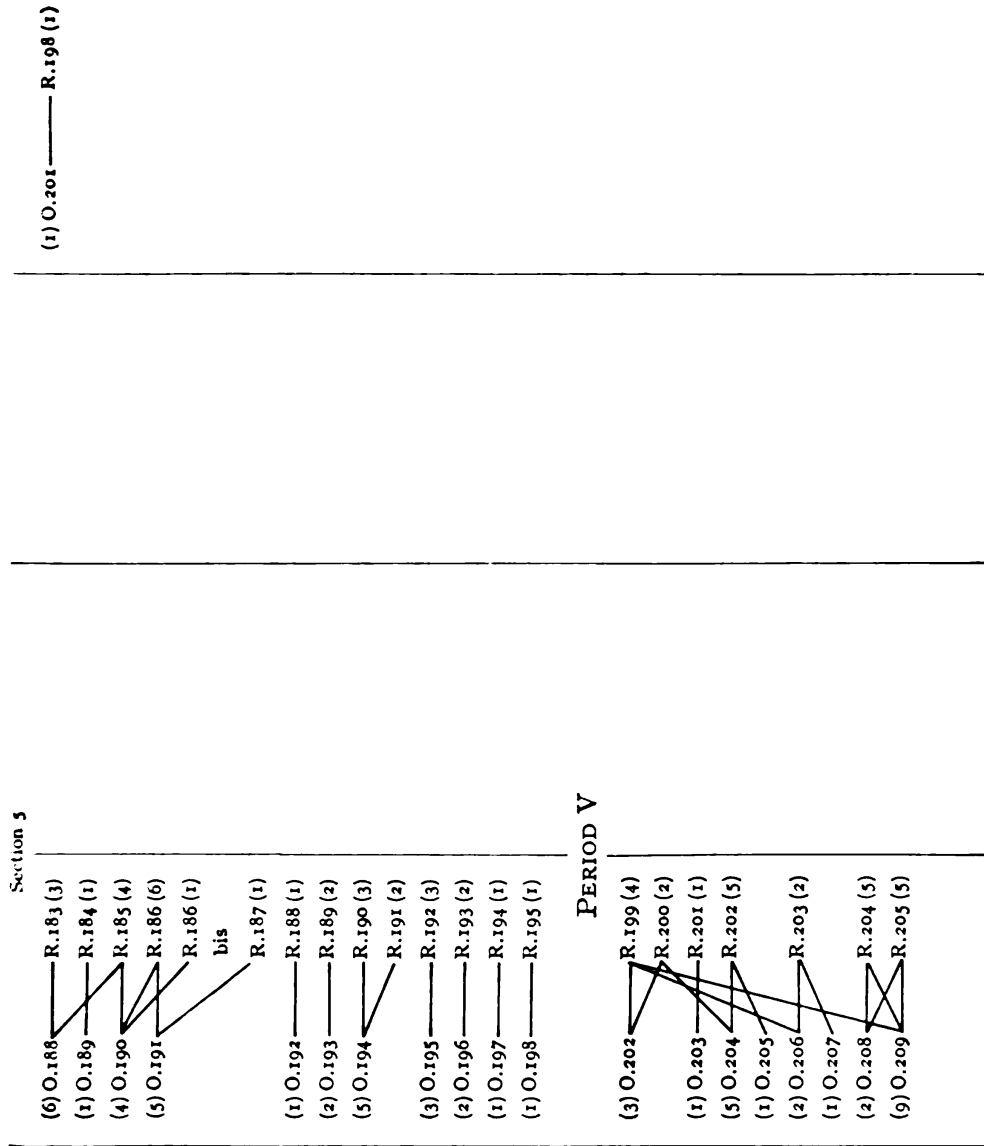




HALF-DRACHMAS		OBOLS		
Cleitor	Tegea	Mantineia	Cleitor	Tegea
PERIOD III				
Section 1				
(3) O.87 — R.75 (4) (1) O.88 — R.76 (5) (1) O.89 — R.77 (4) (2) O.90 — R.78 (1) (4) O.91 — R.79 (2) (5) O.92 — R.80 (2) (9) O.93 — R.81 (2) R.82 (5) R.83 (3) (1) O.94 — R.84 (1)	(1) O.120 — R.108 (1) (10) O.121 — R.109 (6) (3) O.122 — R.110 (4) R.111 (1) R.112 (2) (2) O.123 — R.113 (2) R.114 (2)	(2) O.149 — R.140 (4) (1) O.149 bis — R.141 (3) (1) O.150 — R.141 (3) (1) O.151 — R.141 (3) (1) O.152 — R.141 (3) (2) O.155 — R.143 (2)	(2) O.95 — R.85 (2)	(1) O.68 — R.111 (1) (6) O.124 — R.115 (6) (1) O.125 — R.116 (1)
Section 2				
(2) O.101 — R.91 (4) (1) O.102 — R.92 (7) (1) O.103 — R.93 (6)	(3) O.126 — R.117 (2) (2) O.127 — R.118 (4) (1) O.128 — R.119 (1)	(6) O.157 — R.67 (1) (9) O.158 — R.145 (9) (22) O.159 — R.146 (2) R.147 (7) R.148 (5) R.149 (1) R.150 (12) (1) O.160 — R.151 (1)	(3) O.106 — R.94 (3) (1) O.107 — R.95 (1)	(2) O.130 — R.120 (1) (3) O.131 — R.121 (4) (3) O.132 — R.122 (6) (1) O.133 — R.122 (6) (2) O.134 — R.122 (6)
		Mantineia		
		(2) O.153 — R.142 (3)	(1) O.154 — R.144 (2)	(2) O.156 — R.144 (2)



HALF-DRACHMAS			OBOLS		
Cleitor	Teges	Mantineia	Cleitor	Teges	Mantineia
		<p>PERIOD IV</p> <p>Section 1 (cont.)</p> <p>(1) O.163 — R.157 (1)</p> <p>(4) O.164 — R.158 (4)</p> <p>(6) O.165 — R.159 (6)</p> <p>(1) O.166 — R.160 (1)</p> <p>(3) O.167 — R.161 (3)</p> <p>(1) O.168 — R.162 (1)</p> <p>(1) O.169 — R.163 (1)</p> <p>(1) O.170 — R.164 (1)</p> <p>(2) O.171 — R.165 (2)</p> <p>Section 2</p> <p>(1) O.172 — R.166 (1)</p> <p>(2) O.173 — R.167 (1)</p> <p>                    R.168 (1)</p> <p>(1) O.174 — R.169 (2)</p> <p>(1) O.175</p> <p>Section 3</p> <p>(1) O.176 — R.170 (2)</p> <p>(2) O.177 — R.171 (1)</p> <p>(1) O.178 — R.172 (1)</p> <p>Section 4</p> <p>(1) O.185 — R.180 (2)</p> <p>(3) O.186 — R.181 (2)</p> <p>(4) O.187 — R.182 (4)</p>			<p>(3) O.183 — R.178 (3)</p> <p>(1) O.184 — R.179 (1)</p> <p>(1) O.199 — R.196 (1)</p> <p>(1) O.200 — R.197 (1)</p>





CHRONOLOGICAL TABLE OF FIFTH CENTURY  
ARCADIAN HISTORY

*Dates are italicised where it is thought that the Arkadikon coinage affords evidence.*

- ca. 490*    Intrigues of Cleomenes. Formation of Arcadian Confederacy. Beginning of Arkadikon coinage (Cleitor).
- ca. 479*    Battle of Plataea.
- ca. 478*    Introduction of wreathed "owls" at Athens.
- ca. 477*    Wreath on head of goddess on Arkadikon coins of Cleitor mint. Opening of two additional Arkadikon mints at Tegea and Mantinea. Synoikismoι of these two states.
- ca. 475/3*   Battle of Tegea.
- ca. 469*    Beginning of Messenian Revolt.
- ca. 468*    Siege of Mycenae.
- ca. 463/2*   Battle of Dipaea.
- ca. 460/59*   End of Messenian Revolt.
- ca. 459*    Closing of Arkadikon mints at Cleitor and Tegea.
- ca. 457*    Battle of Tanagra.
- ca. 446*    Invasion of Attica by Pleistoanax and Spartan Alliance.
- ca. 423*    Expansion of Mantinea.
- ca. 418*    Battle of Mantinea. Closure of the Arkadikon mint.

## INDEX TO PLATE XIV

- (a) Uffizi; cast at Winterthur. (a)–(f) Archaic Heraean.
- (b) Berlin (ex Inhoof-Blumer); cast at Winterthur.
- (c) Berlin (ex Inhoof-Blumer); Winterthur cast.
- (d) New York (ANS).
- (e) Berlin (ex Prokesch-Osten); cast at Winterthur.
- (f) Hirsch XIII, 2805.
- (g) Corinthian drachma; *BMCCorinth*, pl. 2, 8.
- (h) Corinthian drachma; *BMCCorinth*, pl. 2, 23.
- (i) Bronze herm of the Doryphoros, Naples (Richter, *Sculpture*, fig. 648).
- (j) 281 (b).
- (k) 289 (b).
- (l) Head of Athena, Bologna (Picard, *Sculpture, Periode Classique*, fig. 143).
- (m)–(n) 289 (a).
- (o) 310 (a).
- (p) Terina didrachm. BM specimen.
- (q) 303 (b).







## PLATES





The die-combinations are indicated by the numbers in italics.



## II



The die-combinations are indicated by the numbers in italics.

### III



The die-combinations are indicated by the numbers in italics.

# IV



The die-combinations are indicated by the numbers in italics.



The die-combinations are indicated by the numbers in italics.

# VI



The die-combinations are indicated by the numbers in italics.

# VII



The die-combinations are indicated by the numbers in italics.



# VIII



The die-combinations are indicated by the numbers in italics.



The die-combinations are indicated by the numbers in italics.



X



The die-combinations are indicated by the numbers in italics.



The die-combinations are indicated by the numbers in italics.

# XII



The die-combinations are indicated by the numbers in italics.



The die-combinations are indicated by the numbers in italics.

# XIV



The die-combinations are indicated by the numbers in italics.

NUMISMATIC NOTES AND MONOGRAPHS

No. 156

CJ  
35  
N9  
no. 156

THE MINTING  
OF ANTONINIANI A.D. 238-249  
AND THE SMYRNA HOARD

By SAMUEL K. EDDY



THE AMERICAN NUMISMATIC SOCIETY  
NEW YORK

1967



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BROADWAY BETWEEN 155TH & 156TH STREETS

NEW YORK, N.Y. 10032

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NUMISMATIC NOTES AND MONOGRAPHS

*Number* 156





# The Minting of Antoniniani A.D. 238—249 and The Smyrna Hoard

By SAMUEL K. EDDY



THE AMERICAN NUMISMATIC SOCIETY  
NEW YORK  
1967

100

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## ACKNOWLEDGEMENTS

The research for this monograph was begun while I was a member of the faculty of the University of Nebraska, and was completed after I had joined the Department of History of the University of California at Santa Barbara. The task of locating certain books and articles in journals was much facilitated by the staffs of the libraries of these two universities, and I should like to thank Cecelie North of Nebraska and Shiela McMurray of California for their great patience and perseverance in tracking down several hard-to-find items.

I wish to acknowledge also the support granted by the Committee on Research of the University of California, Santa Barbara, which made possible the typing of the manuscript and the initial photography of the coins.

Above all, I am indebted to the Rev. I. C. G. Campbell, of Weeping Water, Nebraska, U.S.A., for the opportunity to study and publish this hoard. I should add, however, that since this monograph was written, the hoard has been broken up.



## THE SMYRNA HOARD

The Smyrna hoard was found buried in a field near the site of ancient Smyrna, in the vicinity of modern İzmir in Turkey. The find was made by an unknown person probably in the winter or early spring of 1954. There were at this time road-building operations in the neighborhood, which are said to have cut through an ancient cemetery, but whether this was the place where the coins were discovered is unknown. The person who found the coins may have been stimulated to search for antiquities by the then recent Anglo-Turkish excavations at Smyrna.<sup>1</sup> The hoard was taken by the finder to a reputable coin dealer in Constantinople—a personal friend of Rev. Campbell—and sold to him. The original container was then in some way disposed of, and nothing is known of its description. When the hoard was eventually purchased, the coins were deposited loosely on a shelf of a cabinet in the dealer's shop. There is no reason to suppose, however, that any of the coins in the hoard have become lost, or that the hoard is anything but genuine, or that any of the above details is not trustworthy.

The hoard contains 1,243 antoniniani of certain emperors and their families, and one denarius, as follows:

Caracalla	5
Julia Domna	8
Elagabalus	12
Balbinus	2
Pupienus	2
Gordian III	662 and one denarius
Philip I	423
Otacilia	4
Philip II	38
Trajan Decius	54
Herennia Etruscilla	1

<sup>1</sup> J. M. Cook, "Archaeology in Greece, 1952," *JHS* LXXIII (1953), 124–125.



Herennius Etruscus	11
Hostilian	3
Trebonianus Gallus	7
Volusian	5
Aemilian	2
Valerian I	4
TOTAL	1,243 and one denarius

There were an additional ten coins in the lot purchased, which are certainly intrusions. They were presumably added by the finder of the hoard to increase its weight and therefore his sale price. These include seven denarii of emperors of the second and early third centuries. That these coins were not originally included with the antoniniani of the hoard is reasonably certain because of their rather clean condition and purple-gray patina, which differed noticeably from the green patina and brown dirt on the antoniniani. The seven denarii are as follows:

<i>Emperor</i>	<i>RIC</i>
Vespasian	4
Hadrian	237
Faustina	illegible
Antoninus Pius	431
Septimius Severus	40
Geta	9b
Caracalla	238a

Emperors of the fourth century are represented by three silver coins which are certainly intrusions; there is one each of Constantine I, Licinius, and Gratian.

Campbell carried out cleaning and preliminary identification. The latter was subsequently checked by the author, who also weighed the coins on a chemist's balance sensitive to one thousandth of a gram. Between these two operations, that is, before weighing, ten coins were unfortunately dispersed from the hoard, but this is a matter of small consequence.<sup>2</sup>

<sup>2</sup> The following coins were given away (numbers refer to *RIC*): Gordian III: 1-71, 1-83, 1-84, 2-86, 1-88, 1-95. Philip I: 1-62. Philip II: 1-230. Decius: 1-12b.

The coins when cleaned were found to be in very good condition. All the antoniniani were readily identifiable and entirely legible. A respectable number are almost uncirculated (*V.F.*); most seem to have been in circulation for some time, but show no great amount of wear, and are unmarked in the catalogue. The rest are slightly worn (*F.*) and only a few are worn (*G.*) or badly worn (*W.*).

In the catalogue of the hoard the coins of emperors other than Gordian III and Philip I and his family are listed in groups of types according to the system of Mattingly, Sydenham, and Sutherland in the volumes of *The Roman Imperial Coinage*. For Gordian and Philip each specimen is listed, since the state of the mint during the reigns of these two emperors is the main subject of this monograph.

Identification as to mint (Rome, Antioch, Viminacium, Mediolanum) is included for the specimens listed under Gordian III and Philip I. For Gordian III, attribution to mints follows Mattingly, Sydenham, and Sutherland. For Philip I, however, there are some departures from that system, as discussed below, pp. 84 ff.

In the next column, which shows the direction of strike, the head of the arrow indicates at the nearest hour on a clock face the point of lightest impression. The base of the arrow, therefore, is the point of heaviest impression. An "X" indicates those specimens so fairly struck that no differences of impression around the edge are observable.

In the next column to the right the relationship of obverse and reverse dies is shown, counting as  $\uparrow\downarrow$  or  $\uparrow\uparrow$  all coins which are exactly in this alignment or only a few degrees off. Only coins whose dies were skewed more than a few degrees from vertical alignment are shown exactly. It is assumed that the position of the obverse is  $\uparrow$ , so that the column shows the position of the reverse die.

## CATALOGUE OF COINS

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
CARACALLA (5)					
I	258a	4.91			P.M.TR.P.XVIII COS.III P.P. Jupiter stg. holding thunder- bolt and sceptre.
2	258b	4.92			As preceding.
3	264b	5.09			P.M.TR.P.XVIII COS.III P.P. Sol stg. holding globe.
4	281a	5.06			P.M.TR.P.XVIII COS.III P.P. Sol stg. holding globe.
5	312c	5.41			VENVS VICTRIX Venus stg. holding helmet and sceptre; captives std.
JULIA DOMNA (8)					
6	379a	5.44			LVNA LVCIFERA Luna in biga.
7-II	388a	4.99			VENVS GENETRIX Venus std. holding sceptre. ( <i>Av.wt.</i> ).
12-13	389a	5.31			VENVS GENETRIX Venus std. holding apple and sceptre; Cupid. ( <i>Av.wt.</i> ).
ELAGABALUS (12)					
14-16	I	4.67			<i>Obv.</i> : 2f. P.M.TR.P.COS.P.P. Roma std. holding Victory and sceptre. ( <i>Av.wt.</i> ).
17	18	5.05			<i>Obv.</i> : 3f. P.M.TR.P.II.COS.II. P.P. Fortuna std. holding rud- der on globe and cornucopia; wheel.
18-19	22	4.50			<i>Obv.</i> : 3f. P.M.TR.P.II.COS.II.P.P. Providentia stg. holding rod and cornucopia; globe. ( <i>Av.wt.</i> )

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
20	72	5.23			<i>Obv.</i> : 3f. FIDES MILITVM Fides stg. holding standard and vexillum.
21	120	4.97			<i>Obv.</i> : 1e. MARS VICTOR Mars adv. r. holding spear and trophy.
22-23	122	4.93			<i>Obv.</i> : 2f. As preceding ( <i>Av.wt.</i> ).
24	138	4.99			<i>Obv.</i> : 2f. SALVS ANTONINI AVG. Salus stg. feeding held snake.
25	149	4.90			<i>Obv.</i> : 3e. TEMPORVM FELICITAS Felicitas stg. holding caduceus and cornucopia.

## BALBINUS (2)

26-27	II	4.34			FIDES MVTVA AVGG. Clasped hands. ( <i>Av.wt.</i> ).
-------	----	------	--	--	---

## PAPIENUS (2)

28	IOb	4.23			CARITAS MVTVA AVGG. Clasped hands.
29	IIb	4.47			PATRES SENATVS Clasped hands.

## GORDIAN III (663)

*Mint of Rome*

30	I	5.05	↘	↓	FIDES MILITVM Fides stg. holding standard and sceptre.
31		4.73	↘	↓	<i>F.</i>
32		4.72	↘	↓	(PLATE I, 2).
33		4.56	↘	↓	
34		4.54	→	↑	<i>F.</i>

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
35		4.53	↘	↓	
36		4.44	→	↓	
37		4.36	↘	↓	(PLATE I, 1).
38		4.03	↗	↓	
39	2	4.78	↘	↑	IOVI CONSERVATORI Jupiter stg. holding thunderbolt; Gor- dian stg. holding sceptre. <i>V.F.; thick flan.</i>
40		4.68	→	↑	
41		4.67	↘	↓	
42		4.53	×	↓	
43		4.34	↓	↑	
44		4.17	↑	↓	(PLATE I, 14).
45		4.13	↘	↑	
46		3.68	↘	↓	(PLATE I, 13).
47		3.51	↘	↑	
48	3	4.58	↘	↑	PAX AVGVSTI Pax stg. hold- ing branch and sceptre.
49		4.33	↘	↓	
50		4.32	↘	↗	
51		4.28	↘	↓	<i>F.</i>
52		4.25	↘	↘	<i>F.</i>
53		4.02	↘	↑	<i>F.</i> (PLATE I, 7).
54		3.84	↘	↑	(PLATE I, 8).
55	4	5.11	↘	↓	PROVIDENTIA AVG. Providen- tia stg. holding globe and scep- tre.
56		5.08	←	↑	
57		5.04	↘	↑	
58		4.84	↘	↑	
59		4.82	↘	↓	
60		4.68	↘	↓	
61		4.60	↘	↓	
62		4.60	↘	↑	
63		4.34	↘	↑	

The Smyrna Hoard

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Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
64		4.12	↘	↓	
65		4.11	↘	↓	Same obv. die as No. 67.
66		4.11	↗	↓	
67		4.10	↘	↑	Same obv. die as No. 65 (PLATE I, 17).
68		3.96	↘	↑	(PLATE I, 16).
69	5	5.19	↘	↓	VICTORIA AVG. Victory adv. l. holding wreath and palm.
70		4.60	↘	↘	
71		4.58	↘	↓	
72		4.57	↘	↑	Same obv. die as No. 81.
73		4.49	→	↓	(PLATE I, 5).
74		4.48	↘	↑	
75		4.41	↘	↑	
76		4.34	↘	↘	V.F. (PLATE I, 4).
77		4.33	↘	↑	G.
78		4.28	↗	↓	G.
79		4.23	↘	↑	G.
80		4.07	↘	↓	F.
81		3.81	×	↓	F.; same obv. die as No. 72.
82	6	4.76	↘	↗	VIRTUS AVG. Virtus stg. holding spear; oval shield.
83		4.36	↘	↑	
84		4.22	↘	↑	
85		4.13	↘	↗	V.F.
86		4.05	↗	↓	(PLATE I, 10).
87		3.93	↘	↑	
88		3.90	↓	↑	
89		3.86	×	↑	(PLATE I, 11).
90		3.79	↘	↑	
91		3.69	↘	↑	
92	15	4.13	↘	↓	P.M.TR.P.II COS.P.P. Fides stg. holding standard and sceptre. V.F. (PLATE I, 3).

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
93	16	3.67	↘	↑	V.F.
94		3.50	↘	↑	(PLATE II, 4).
95		5.18	↘	↑	P.M.TR.P.II COS.P.P. Jupiter stg. holding thunderbolt; Gor- dian stg. holding sceptre. <i>Thick flan.</i>
96		4.51	↘	↓	(PLATE II, 16).
97	18	4.44	↘	↓	
98		4.44	↘	↑	
99		4.04	↘	↗	(PLATE I, 15).
100		5.18	←	↓	P.M.TR.P.II COS.P.P. Provi- dentia stg. holding globe and sceptre.
101		5.15	↘	↗	
102		4.96	↘	↑	F. (PLATE I, 18).
103	19	4.73	↘	↓	
104		3.91	↘	↑	(PLATE II, 13).
105		5.14	↘	↑	P.M.TR.P.II COS.P.P. Victory adv. l. holding wreath and palm. G.
106		4.74	↘	↑	V.F. (PLATE II, 1).
107		4.36	↗	↓	
108		4.07	↘	↘	F. (PLATE I, 6).
109	20	3.88	↘	↑	F.
110		3.34	↘	↑	G.
111		4.88	↘	↗	P.M.TR.P.II COS. P.P. Virtus stg. holding spear; oval shield. (PLATE I, 12).
112		3.99	↘	↑	(PLATE II, 10)
113		3.91	↘	↘	
114		5.40	↘	↗	AEQVITAS AVG. Aequitas stg. holding scales and cornucopiae.
115		4.82	↘	↘	
116		4.54	↘	↘	

The Smyrna Hoard

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<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
I17	35	4.47	→	↗	(PLATE II, 8).
I18		4.38	↘	↓	V.F.; base.
I19		4.32	↙	↓	
I20		4.28	↙	↙	
I21		4.28	↙	↗	
I22		3.96	↖	↓	
I23		3.90	→	↑	
I24		5.26	↙	↓	CONCORDIA AVG. Concordia std. holding patera and double cornucopiae. Base.
I25	36	5.14	↘	↓	
I26		4.77	↘	↑	
I27		4.67	↘	↓	F.
I28		4.44	↘	↑	
I29		4.41	↘	↑	
I30		4.31	↘	↓	
I31		4.15	↘	↙	
I32		3.90	→	↓	Single cornucopia.
I33		3.89	↘	↓	
I34		3.82	↘	↑	(PLATE II, 11).
I35		3.69	↗	↑	
I36		3.55	↗	↑	
I37		5.12	↘	↑	LIBERALITAS AVG. II Libera- litas stg. holding abacus and cornucopiae. (PLATE II, 17).
I38		4.93	↘	↓	
I39		4.90	↗	↑	
I40		4.84	↙	↓	
I41		4.83	↙	↑	
I42		4.80	↙	↑	
I43		4.73	↙	↑	
I44		4.61	↙	↓	
I45		4.14	↙	↓	
I46		4.05	↙	↑	



Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
147	37	4.03	↘	↓	F. P.M.TR.P.II COS.P.P. Gordian stg. sacrificing, holding patera and wand.
148		3.99	↘	↑	
149		3.84	↗	↑	
150		6.33	↘	↓	
151	38	5.16	×	↑	F. F. F.
152		4.82	×	↓	
153		4.49	↘	↓	
154		4.42	↘	↓	
155		4.38	↘	↓	Thin flan (PLATE. II, 14). Thin flan. Thin flan.
156		4.21	↗	↓	
157		4.18	→	↓	
158		4.03	×	↑	
159		3.90	↘	↑	ROMAE AETERNAE Roma std. holding Victory and spear.
160		3.89	×	↑	
161		3.65	↙	↑	
162		3.51	↘	↓	
163		3.12	↓	↓	V.F. V.F. (PLATE II, 5).
164		4.92	×	↓	
165		4.64	↘	↙	
166		4.64	↘	↗	
167	39	4.15	↘	↗	G. VIRTUS AVG. Virtus stg. hold- ing branch and spear; shield.
168		4.13	×	↓	
169		4.07	↙	↓	
170		4.06	↓	↑	
171		3.96	×	↙	
172		3.94	↘	↑	
173		3.91	↓	↓	
174		5.60	×	↓	
175		5.57	↘	↑	
176		4.85	↘	↑	

The Smyrna Hoard

II

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
177		4.69	↘	↓	F.
178		4.56	↘	↑	
179		4.37	↘	↗	
180		4.29	↘	↓	
181		4.08	↘	↑	
182		3.96	×	↑	(PLATE II, 2).
183		3.72	↘	↑	
184	—	3.90	↘	↓	Variant, as RIC 52n. (CONCORDIA MILIT).
185	51	4.88	×	↑	AEQVITAS AVG. Aequitas std. holding scales and cornucopiae. V.F.
186		4.25	↘	↗	
187		4.24	↘	↑	V.F.
188		4.18	↘	↓	(PLATE II, 9).
189		3.91	↘	↓	
190		3.74	↘	↗	
191	52	4.66	↘	↓	CONCORDIA AVG. Concordia std. holding patera and double cornucopiae. (PLATE II, 12).
192		4.36	↘	↑	
193	53	4.69	×	↑	LIBERALITAS AVG. II Liberalitas stg. holding abacus and cornucopiae.
194		4.23	↓	↑	F.
195		4.08	↘	↑	V.F. (PLATE II, 15).
196		4.03	↘	↓	
197		3.64	↘	↑	
198		3.58	↓	↑	F.
199	54	4.54	↘	↓	P.M.TR.P. II COS.P.P. Gordian stg. sacrificing, holding patera and wand. (PLATE II, 18).
200		4.44	↘	↓	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
201	55	4.77	↙	↑	ROMAE AETERNAE Roma std. holding Victory and spear.
202		4.34	↘	↓	(PLATE II, 6).
203		3.81	↙	↑	
204	56	4.48	↘	↓	VIRTUS AVG. Virtus stg. holding branch and spear; shield.
205		3.85	↙	↓	(PLATE II, 3).
206	63	4.48	↘	↑	AEQVITAS AVG. Aequitas stg. holding scales and cornucopiae.
					<i>Oval flan.</i>
207		4.40	↘	↙	
208		4.38	×	↑	
209		4.36	×	↙	
210		4.35	↙	↓	F.
211		4.28	↗	↗	
212		4.22	↘	↙	
213		3.92	↗	↓	(PLATE III, 7).
214		3.84	↘	↙	G., <i>oval flan.</i>
215		3.74	↗	↗	G.
216	65	4.69	×	↑	CONCORDIA MILIT. Concordia std. holding patera and double cornucopiae.
					<i>Double struck.</i>
217		4.56	↗	↗	
218		4.51	↘	↑	
219		4.25	↙	↗	
220		3.88	×	↓	
221		3.87	×	↓	(PLATE III, 10).
222		3.18	↗	↑	<i>Thin flan.</i>
223	67	5.86	↗	↓	LIBERALITAS AVG. III Liberalitas stg. holding abacus and cornucopiae. (PLATE III, 13).
224		5.60	↘	↓	
225		5.17	↗	↑	
226		4.10	↙	↑	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
227	68	3.46	×	↑	<i>Thin, oval flan.</i>
228		3.40	↘	↓	
229		5.01	↘	↓	P.M.TR.P.II COS.P.P. Gordian stg. sacrificing, holding patera and wand.
230		4.88	↗	↓	V.F. (PLATE III, 16).
231	69	4.75	↘	↑	<i>Clipped.</i>
232		4.72	↘	↓	
233		4.66	↓	↓	
234		4.57	↓	↓	G.
235		4.52	↘	↑	
236		4.24	↘	↓	P.M.TR.P.III COS.P.P. Gordian stg. sacrificing, holding patera and wand. <i>Oval flan.</i>
237		3.93	↘	↑	
238		4.46	→	↑	ROMAE AETERNAE Roma std. holding Victory and spear. <i>Oval flan.</i>
239		5.52	×	↓	
240		5.29	↘	↑	V.F.
241	71	5.14	↘	↓	<i>Oval flan.</i>
242		5.10	↘	↓	
243		4.98	↘	↑	F.
244		4.49	↘	↑	
245		4.44	↓	↑	F.
246		4.11	×	↓	
247		3.95	↘	↑	<i>Thin flan; clipped.</i>
248		3.93	↘	↓	
249		3.92	↓	↓	<i>Thin flan</i> (PLATE III, 1).
250		3.73	↘	↓	<i>Thin flan.</i>
251		3.58	↘	↓	VIRTVS AVG. Virtus stg. holding branch and spear; shield.
252		3.37	↗	↑	
253		5.17	↗	↓	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
254		4.59	↘	↑	F.
255		4.56	↘	↑	
256		4.52	↘	↓	Oval flan.
257		4.44	↘	↑	(PLATE III, 4).
258		4.37	↗	↓	Oval flan.
259		4.30	↗	↓	
260		4.30	↘	↙	
261		4.22	↘	↓	G.
262		4.01	↘	↓	Oval flan.
263		3.80	↘	↓	G.
264		3.62	↗	↓	Oval flan.
265		3.61	↗	↑	V.F.
266		3.19	↗	↑	G.; thin flan.
267					Dispersed.
268	83	5.28	↙	↓	AETERNITATI AVG. Sol stg. holding globe. (PLATE III, 8).
269		5.18	↘	↓	
270		5.03	↘	↓	V.F.
271		4.79	↘	↑	
272		4.75	×	↓	
273		4.64	↘	↓	
274		4.64	↘	↓	
275		4.61	↘	↓	
276		4.60	↘	↓	
277		4.60	↗	↗	
278		4.56	↘	↑	G.
279		4.53	↗	↑	
280		4.45	↘	↓	Bent flan.
281		4.40	↙	↓	
282		4.38	↙	↓	
283		4.35	↙	↓	F.
284		4.34	→	↑	
285		4.33	↘	↓	Oval flan.
286		4.32	↘	↙	

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Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
287		4.27	↓	↑	
288		4.16	↗	↓	
289		4.16	↖	↑	
290		4.11	↘	↑	V.F.
291		4.11	↘	↑	Oval flan.
292		4.09	→	↑	
293		4.07	↗	↓	Oval flan.
294		4.07	↘	↓	
295		4.01	×	↑	V.F.
296		3.96	→	↑	
297		3.92	↗	↙	
298		3.89	↖	↓	
299		3.89	↘	↓	
300		3.86	→	↓	
301		3.67	↗	↓	
302		3.60	↘	↑	F.
303		3.53	←	↓	F.; thin flan.
304		3.49	↘	↓	
305		3.44	↙	↓	
306		3.42	↙	↑	G.
307		3.25	↖	↑	Clipped; thin flan.
308					Dispersed.
309	84	5.55	↘	↓	IOVI STATORI Jupiter stg. holding long sceptre and thun- derbolt.
310		5.41	↘	↑	F.
311		5.34	↘	↓	
312		5.19	→	↑	V.F.
313		5.14	↘	↓	V.F.
314		5.09	↗	↓	
315		4.96	↘	↓	
316		4.87	↗	↓	
317		4.81	↘	↓	V.F.
318		4.79	×	↓	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
319		4.66	↗	↓	
320		4.62	↘	↑	
321		4.59	↘	↓	F.
322		4.54	↘	↓	
323		4.52	↙	↓	
324		4.43	↙	↓	
325		4.41	↘	↑	
326		4.40	↙	↑	F.; oval flan.
327		4.38	↙	↓	V.F.
328		4.38	↘	↑	V.F.
329		4.36	↗	↓	G.
330		4.33	↘	↓	
331		4.32	←	↑	
332		4.24	↗	↑	
333		4.24	↘	↑	
334		4.23	↙	↓	
335		4.21	↘	↑	
336		4.19	↘	↑	Oval flan.
337		4.17	↘	↑	Oval flan.
338		4.11	→	↗	
339		4.09	↙	↑	
340		4.03	↘	↑	
341		3.98	↙	↓	Oval flan.
342		3.90	→	↑	V.F. (PLATE III, 2).
343		3.90	←	↑	Oval flan.
344		3.86	↓	↓	
345		3.83	↗	↓	Oval flan.
346		3.83	←	↑	
347		3.81	↘	↑	
348		3.78	↙	↗	
349		3.74	↘	↓	Oval flan.
350		3.71	↘	↓	Oval flan.
351		3.69	↙	↓	
352		3.63	↙	↓	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
353	85	5.96	↖	↓	<i>Dispersed.</i>
354					IOVIS STATOR Jupiter stg. holding long sceptre and thun- derbolt.
355					
356					
357					
358	86	3.93	↘	↑	
359		5.80	×	↑	LAETITIA AVG. N. Laetitia stg. holding wreath and anchor.
360		5.23	↗	↑	<i>Oval flan.</i>
361		5.17	×	↓	
362		4.91	↘	↑	
363		4.88	↘	↑	<i>V.F.</i>
364		4.77	↗	↓	
365		4.77	↘	↑	
366		4.74	↘	↓	
367		4.74	×	↓	
368		4.70	×	↓	
369		4.70	↗	↑	
370		4.64	↘	↓	
371		4.56	↘	↓	
372		4.52	↘	↗	
373		4.51	↘	↑	
374		4.46	↘	↓	
375		4.42	↘	↓	
376		4.39	↗	↓	
377		4.38	↘	↓	<i>V.F.; oval flan.</i>
378		4.35	↘	↓	<i>Oval flan.</i>
379		4.31	↘	↓	
380		4.24	→	↑	
381		4.22	↘	↑	
382		4.21	↘	↑	
383		4.21	↘	↑	<i>V.F.; oval flan.</i>



<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
384		4.20	↗	↓	
385		4.19	↗	↘	V.F.
386		4.16	↖	↑	
387		4.09	↗	↑	V.F.
388		4.08	↗	↑	
389		4.08	↘	↖	
390		4.05	↘	↑	
391		4.01	↖	↓	V.F.
392		3.95	↗	↓	V.F.; oval flan.
393		3.91	↘	↑	
394		3.83	↘	↑	
395		3.82	↗	↓	
396		3.78	↘	↓	
397		3.75	↘	↑	
398		3.72	↗	↓	V.F. (PLATE III, 5).
399		3.72	↘	↑	
400		3.69	↘	↓	Thin flan.
401		3.49	↘	↓	Thin, oval flan.
402					Dispersed.
403					Dispersed.
404	87	5.30	↘	↑	P.M.TR.P.III COS.II P.P. Apollo std. holding branch; lyre.
405	88	5.17	↘	↑	P.M. TR. P. IIII COS. II P.P. Apollo std. holding branch; lyre.
406		5.09	↗	↑	
407		4.83	←	↓	Oval flan.
408		4.81	↑	↓	
409		4.60	↘	↗	Oval flan.
410		4.48	↖	↑	
411		4.43	↗	↓	
412		4.38	↗	↑	
413		4.37	↘	↑	(PLATE III, 14).
414		4.37	↘	↑	V.F.

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Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
415		4.36	↙	↓	
416		4.34	↘	↓	V.F.
417		4.17	↗	↓	Oval flan.
418		4.14	↖	↓	V.F.
419		3.97	↘	↓	Clipped; oval flan.
420		3.84	↘	↓	
421					Dispersed.
422	89	5.19	↙	↑	P.M.TR.P.V COS.II P.P. Apollo std. holding branch; lyre.
423		5.10	↘	↓	
424		4.97	↗	↑	
425		4.77	×	↓	Oval flan.
426		4.76	↗	↓	
427		4.71	↘	↗	Base.
428		4.55	↘	↑	
429		4.37	→	↗	
430		4.36	×	↓	
431		4.26	↖	↑	
432		4.26	↗	↑	
433		4.24	↗	↓	
434		4.21	×	↓	
435		4.13	→	↑	V.F.; oval flan.
436		4.12	↘	↑	
437		4.07	↖	↑	
438		3.70	×	↓	V.F.
439		3.57	↖	↑	Base.
440	90	5.38	↘	↓	P.M.TR.P.VI COS.II P.P. Apollo std. holding branch; lyre.
441		4.18	×	↓	
442	91	4.37	↘	↑	P.M.TR.P.III COS.II P.P. Gor- dian stg. holding spear and globe.
443		4.03	↘	↓	
444		3.75	←	↓	(PLATE III, 11).

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Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
445	92	5.49	↘	↑	P.M.TR.P.III COS.II P.P. Gordian stg. holding spear and globe.
446		4.85	↓	↓	
447		4.82	↗	↑	<i>Oval flan.</i>
448		4.52	↘	↘	<i>Clipped.</i>
449		4.49	↘	↓	
450		4.34	↗	↓	
451		4.27	↘	↓	
452		4.23	↘	↓	G.
453		4.17	×	↓	
454		4.15	↘	↓	<i>G.; clipped.</i>
455		4.13	↘	↑	<i>Double struck.</i>
456		4.13	↗	↑	
457		4.03	↘	↓	<i>Base; oval flan.</i>
458		3.73	↗	↑	<i>Thin flan.</i>
459		3.63	↘	↑	<i>Edge off flan.</i>
460	93	4.89	↗	↓	P.M.TR.P.V COS.II P.P. Gordian stg. holding spear and globe.
461		4.81	↘	↑	G.
462		4.70	↘	↑	
463		4.68	↘	↑	
464		4.62	×	↗	V.F.
465		4.59	↘	↑	
466		4.58	↘	↑	<i>Oval flan.</i>
467		4.56	↗	↑	
468		4.54	↘	↓	W.
469		4.53	↘	↑	
470		4.37	↘	↓	
471		4.23	↘	↓	d.M.TR.P. V COS.II P.P.
472		4.09	×	↓	
473		4.02	↘	↑	
474		4.01	↗	↑	F.

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<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
475	94	3.87	×	↓	G.
476		3.77	↘	↑	F.; thin flan.
477		3.76	×	↓	Thin flan.
478		3.39	↙	↓	Thin flan.
479		4.08	↙	↑	P.M.TR.P.VI COS.II P.P. Gordian stg. holding spear and globe. F.
480	95	3.68	↘	↑	VIRTVTI AVGVSTI. Hercules stg.; club on rock; lion-skin.
481		5.36	↙	↓	
482		5.08	↗	↙	
483		4.98	↘	↓	
484		4.92	↘	↓	
485		4.92	↙	↙	V.F. (PLATE III, 17).
486		4.79	↘	↗	
487		4.73	×	↓	
488		4.73	×	↙	
489		4.70	↙	↑	
490		4.70	↘	↑	G.; oval flan.
491		4.69	↓	↗	Oval flan. Split flan.
492		4.63	→	↓	
493		4.60	↗	↓	
494		4.54	→	↗	
495		4.53	→	↙	
496		4.52	↘	↑	F.
497		4.47	↘	↓	
498		4.41	↙	↓	
499		4.33	↙	↗	
500		4.29	↙	↙	
501		4.29	↘	↑	Oval flan. G.
502		4.27	→	↓	
503		4.25	×	↑	
504		4.11	↗	↑	
505		4.01	↙	↙	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
506		3.94	→	↓	V.F.
507		3.83	↙	↙	V.F.; <i>split flan.</i>
508		3.77	→	↓	Oval <i>flan.</i>
509		3.76	↖	↙	
510		3.62	↘	↗	Thin <i>flan.</i>
511		3.52	↙	↙	G.; base; <i>split flan.</i>
512					Dispersed.
513	I29	3.62	↙	↑	PIETAS AVGVSTI Pietas stg. raising hands. V.F.; oval <i>flan.</i> Denarius.
514	I40	4.97	↙	↓	FELICIT. TEMP. Felicitas stg. holding long caduceus and cornucopiae.
515		4.90	×	↓	F.
516		4.89	↙	↓	G. (PLATE V, 16).
517		4.71	↘	↓	G.
518		4.43	↗	↓	Oval <i>flan.</i>
519		4.36	↘	↑	F.
520		4.32	↘	↑	F.
521		4.28	↗	↓	(PLATE III, 18).
522		4.28	→	↑	F.; oval <i>flan.</i>
523		3.93	↖	↑	
524		3.79	→	↑	Base.
525	I41	5.58	×	↑	FELICIT. TEMPOR. Felicitas stg. holding long caduceus and cornucopiae. G.
526	I42	5.10	↙	↙	FELICITAS TEMPORVM Feli- citas stg. holding long caduceus and cornucopiae. F.
527		4.70	↖	↓	G.
528		4.61	↗	↓	
529		4.40	↗	↗	F.; oval <i>flan.</i>
530		4.15	↗	↑	F.
531		4.04	↙	↓	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
532	I43	3.72	↘	↗	Thin, oval flan.
533		5.16	↘	↑	FORT. REDVX Fortuna std. holding rudder and cornucop- iae; wheel. (PLATE IV, 1).
534		5.07	↘	↓	
535		4.82	↗	↑	
536		4.61	→	↓	F.
537		4.59	↙	↑	F.
538		4.48	↘	↘	F.
539		4.20	↘	↑	F.
540		4.20	↗	↑	Oval flan.
541		4.02	↘	↘	G.
542		3.95	↑	↓	G.
543		3.88	↗	↓	
544		4.87	↘	↑	FORTVNA REDVX Fortuna std. holding rudder and cornucop- iae; wheel. G. (PLATE III, 6).
545	I44	4.68	↘	↑	
546		4.55	↗	↑	
547		4.52	↗	↑	G. (PLATE V, 1).
548		4.48	↗	↑	G.
549		4.42	↗	↑	F.
550		4.01	↘	↓	
551		3.87	↘	↗	G.
552		5.01	↘	↑	MARS PROPG. Mars adv. r. holding spear and shield. F.
553		4.86	↙	↓	Oval flan.
554		4.75	↘	↓	
555		4.69	↘	↓	
556		4.61	↘	↓	
557		4.51	↘	↓	(PLATE IV, 7).
558		4.34	→	↓	(PLATE V, 13).
559	I45	4.31	↗	↓	F.
560		4.00	↗	↑	Obv. scraped.

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
561	147	3.86	↗	↓	<i>F.</i>
562		4.62	↘	↓	MARTEM PROPVGNATOREM Mars adv. r. holding spear and shield. <i>Oval flan.</i>
563		4.49	↗	↓	
564	148	4.27	×	↓	<i>V.F.</i> (PLATE III, 15).
565		5.27	↘	↑	PROVID.AVG. Providentia stg. holding wand over globe and sceptre.
566		4.82	↘	↓	<i>V.F.</i> (PLATE V, 10).
567	150	4.68	←	↗	
568		4.63	↘	↓	
569		4.47	→	↓	<i>Oval flan</i> (PLATE III, 12).
570		4.46	↘	↑	<i>F.</i>
571		4.37	↘	↑	
572		4.27	↘	↑	
573		4.25	↗	↗	
574		4.21	↘	↑	<i>F.</i>
575		4.00	↘	↑	
576		3.76	↘	↑	
577		3.19	↘	↓	<i>Thin flan.</i>
578		2.98	←	↑	<i>Thin flan.</i>
579		4.99	↗	↑	PROVIDENTIA AVG. Provi- dentia stg. holding wand over globe and sceptre.
580	151	4.73	↘	↓	<i>V.F.</i>
581		3.96	↘	↓	
582		3.72	↘	↑	
583		3.61	↗	↓	<i>F.; thin flan.</i>
584		5.04	↘	↑	SECVRIT. PERP. Securitas stg. holding sceptre; column. <i>F.;</i> <i>oval flan.</i>
585		4.80	↘	↑	<i>G.</i>
586		4.77	↘	↑	

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
587		4.48	↘	↑	
588		4.46	↘	↓	
589		4.34	↗	↓	G. (PLATE III, 9).
590		4.08	↑	↓	F.; oval flan.
591		3.94	↘	↑	Oval flan.
592		3.89	↗	↓	Oval flan.
593		3.80	↑	↓	F.; oval flan.
594		3.76	↖	↓	F.
595		3.58	↑	↑	
596		3.51	←	↓	Base.
597		3.43	↘	↑	F.; thin, oval flan.
598		3.40	↙	↑	F.; thin, oval flan.
599	I52	4.91	×	↓	SECVRIT. PERPET. Securitas stg. holding sceptre; column. F.
600	I53	4.79	↘	↑	SECVRITAS PERPETVA Secur- itas stg. holding sceptre; column.
601		4.68	↘	↑	
602		4.61	↙	↓	F.
603		4.47	→	↑	G. (PLATE IV, 4).
604		4.45	↘	↓	F.
605		4.43	↓	↑	
606		4.36	↙	↑	Oval flan (PLATE V, 7).
607		4.22	↙	↑	
608		4.05	↙	↑	
609		3.83	↙	↑	
610	I54	5.52	↘	↑	VICTOR.AETER. Victory stg. holding palm; captive under shield. (PLATE V, 4).
611		5.02	↘	↑	
612		4.80	↘	↑	Oval flan.
613		4.69	↖	↓	
614		4.54	×	↓	Oval flan.



Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
615		4.36	↘	↓	
616		4.26	×	↓	<i>Clipped.</i>
617		3.94	↓	↑	<i>F.</i>
618		3.88	↗	↓	(PLATE III, 3).
619		3.72	×	↑	<i>F.; oval flan.</i>
620		3.22	↘	↓	
621	155	4.37	↘	↑	VICTORIA AETER. Victory stg. holding palm; captive under shield.
622		4.16	↗	↑	
623	156	4.49	↘	↓	VICTORIA AETERNA Victory stg. holding palm; captive under shield. <i>Oval flan.</i>
624		4.40	↓	↓	<i>F.</i>
625		4.40	↘	↑	<i>Base.</i>
626		4.34	↘	↑	<i>F.</i>
627		4.29	↗	↓	
628		4.00	↘	↓	
629		3.98	↗	↓	

*Mint of Antioch*

630	187a	4.74	↖	↑	LIBERALITAS AVG. Libertas stg. holding pileus and rod. <i>F.; oval flan.</i>
631		4.04	↘	↑	
632		4.00	↘	↑	<i>G.; oval flan.</i>
633	209	5.31	↘	↑	FIDES MILITVM Fides stg. holding two standards.
634		4.54	↗	↑	<i>V.F.; edge off oval flan.</i>
635		4.36	↗	↑	<i>G.; irregular flan</i> (PLATE IV, 8).
636	210	5.73	↘	↓	FORTVNA REDVX Fortuna std. holding rudder and cornucopiae. <i>F.</i>

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
637		5.58	↘	↓	<i>Irregular flan.</i>
638		4.84	↗	↓	<i>V.F.</i>
639		4.75	↘	↙	<i>Oval flan.</i>
640		4.69	↘	↑	<i>V.F.</i>
641		4.56	↓	↙	<i>F. (PLATE IV, 9).</i>
642		4.56	↑	↗	<i>F.</i>
643		4.43	↘	↑	
644		4.42	↘	↓	
645		4.38	↘	↗	<i>G.</i>
646		4.23	→	↓	
647		4.08	↘	↓	<i>F.; base.</i>
648		4.01	→	↙	<i>Oval flan.</i>
649		3.96	↙	↗	<i>G.; clipped.</i>
650		3.86	↗	↑	<i>F.</i>
651		3.68	↗	↙	<i>F.</i>
652	211	4.60	↘	↑	IOVI CONSERVATORI Jupiter stg. holding sceptre and thun- derbolt.
653	212	4.88	↗	↑	MARTI PACIFERO Mars adv. l. holding branch, shield and spear rev. <i>G.</i>
654		4.46	↙	↑	
655		3.87	↗	↑	(PLATE IV, 2).
656	213	5.68	↗	↓	ORIENS AVG. Sol. stg. holding globe; raising r. hand. <i>V.F.</i> ; <i>oval flan</i> (PLATE IV, 3).
657		5.38	↗	↑	<i>F.</i>
658		5.15	←	↑	<i>F.; base.</i>
659		5.06	↘	↗	<i>Oval flan.</i>
660		4.90	↘	↓	
661		4.72	↙	↑	
662		4.62	↘	↑	
663		4.59	↗	↓	
664		4.42	↙	↓	

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
665		4.06	↗	↓	<i>F.</i>
666		4.00	↖	↓	<i>V.F.; oval flan.</i>
667		3.84	→	↓	
668		3.54	↙	↑	<i>F.; thin flan.</i>
669		3.42	↘	↓	<i>Thin flan.</i>
670		3.33	↙	↓	<i>F.; thin flan.</i>
671		3.19	↙	↓	<i>F.; thin flan.</i>
672	214	4.64	↘	↑	PAX AVGVSTI Pax adv. l. holding branch and sceptre. (PLATE IV, 5).
673		4.33	↘	↑	
674		3.95	↘	↑	<i>G.</i>
675	216	5.12	←	↓	SAECVLI FELICITAS Gordian stg. holding spear and globe. <i>G.</i>
676		4.90	←	↓	
677		4.87	↙	↓	
678		4.67	↘	↓	
679		4.61	↘	↓	<i>F.</i>
680		4.60	←	↓	<i>W.</i>
681		4.30	↗	↓	<i>F.; base.</i>
682		4.28	↗	↑	<i>G.</i>
683		4.22	↗	↓	
684		4.22	↗	↓	<i>F.</i>
685		4.20	↘	↓	<i>Oval flan (PLATE IV, 6).</i>
686		4.11	↓	↓	<i>F.</i>
687		4.11	↗	↑	<i>F.</i>
688		4.03	↙	↓	<i>F.</i>
689		3.70	←	↓	<i>G.</i>
690		3.59	↓	↑	<i>Thin flan.</i>
691		3.35	↗	↑	<i>G.; thin flan.</i>
692	217	4.17	↘	↓	VICTORIA AVG. Victory adv. r. holding wreath and palm. <i>F.</i>

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
PHILIP I (423)					
<i>Mint of Rome</i>					
693	2b	5.31	↘	↓	P.M.TR.P.II COS.P.P. Philip I std. holding globe and short sceptre. <i>V.F.</i>
694		4.94	↘	↓	<i>F.</i> ; <i>base.</i>
695		4.60	→	↑	<i>V.F.</i> ; <i>obverse scraped</i> ; <i>base.</i>
696		4.49	↘	↓	
697		4.40	↓	↑	<i>Base.</i>
698		4.38	↘	↑	
699		4.36	←	↑	<i>Base.</i>
700		4.18	↓	↑	
701		3.71	↙	↘	
702		3.44	↙	↑	
703	3	5.22	↙	↓	P.M.TR.P.III COS.P.P. Felicitas stg. holding caduceus and cor- nucoptae.
704		4.87	↗	↓	
705		4.61	↙	↓	<i>F.</i>
706		4.58	↙	↓	<i>F.</i>
707		4.51	↙	↓	
708		4.36	↙	↓	(PLATE VI, 13).
709		4.20	↗	↓	
710		4.13	↙	↑	<i>F.</i> ; <i>base.</i>
711		4.10	↗	↓	
712		4.08	↘	↑	
713		4.04	→	↓	
714		3.95	↗	↑	
715		3.95	↗	↑	<i>Oval flan.</i>
716		3.85	↘	↓	<i>F.</i>
717		3.74	↗	↓	<i>V.F.</i>
718		3.64	↗	↓	<i>F.</i>
719		3.54	↙	↑	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
720	4	4.54	↘	↓	P.M.TR.P.III COS.II P.P. Felicitas stg. holding caduceus and cornucopiae. <i>F.</i>
721		4.26	↗	↑	<i>F.</i>
722		4.18	↗	↑	
723		3.95	↖	↓	<i>F.</i>
724		3.89	↖	↑	
725		3.82	↗	↓	
726		3.38	↘	↓	<i>Thin flan.</i>
727	5	4.40	↘	↓	P.M.TR.P.III COS.II P.P. Felicitas stg. holding caduceus and cornucopiae. <i>F.</i> (PLATE VI, 17).
728		4.36	↖	↓	
729		4.30	↘	↓	
730		4.17	↗	↓	<i>F.</i>
731		3.99	←	↑	<i>Base.</i>
732		3.91	×	↓	
733		3.81	↗	↑	
734	7	3.64	↖	↓	
735		5.31	↖	↑	P.M.TR.P.V. COS.III P.P. Mars stg. holding branch; spear and shield; in field A. (PLATE VII, 1).
736		5.22	←	↓	
737		4.00	↖	↓	
738		3.81	↗	↓	
739		3.74	↖	↑	
740		3.64	↘	↓	
741	8	4.09	↘	↑	NOBILITAS AVGG. Nobilitas stg. holding sceptre and globe; in field Z. <i>Oval flan</i> (PLATE VII, 13).
742		3.93	↘	↓	<i>F.</i>
743		3.77	↖	↑	<i>Base.</i>

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
744	9	3.65	↙	↑	G. Oval flan. TRANQVILLITAS AVGG. Tran- quillitas stg. holding capri- corn(?) and sceptre; in field B.
745		3.58	↘	↓	
746		3.57	↙	↓	
747		5.46	↗	↓	
748	10	4.37	↗	↑	(PLATE VII, 4). Base. VIRTUS AVGG. Philip I and II on horses adv. r., r. hands raised (no spear); in ex. €. (PLATE VII, 16). SAECVLARES AVGG. Lion adv. r.; in ex. l. Base.
749		4.12	↗	↑	
750		3.57	↙	↓	
751		4.03	↙	↓	
752	12	4.92	→	↑	Base; oval flan.
753	15	4.90	↗	↑	Thin flan (PLATE VI, 3). SAECVLARES AVGG. She-wolf stg. suckling the twins; in ex. II. Uncleaned wt.
754		4.37	↙	↑	
755		4.09	↗	↑	
756		3.98	↙	↓	
757		3.80	×	↓	
758		3.71	↙	↓	
759		3.60	↘	↑	
760		3.01	↗	↑	
761		4.71	↘	↓	
762		4.70	↘	↓	
763		4.29	↘	↓	
764		4.15	↗	↑	(PLATE VI, 6).
765		4.10	↘	↑	
766		4.05	↗	↑	
767		3.84	↙	↑	
768		3.68	↗	↓	Base.
769		3.66	↗	↓	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
770	19	5.07	↗	↑	SAEVLARES AVGG. Stag adv. r.; in ex. V or U. (PLATE VI, 15).
771		4.68	↗	↓	
772		4.41	↘	↑	
773		4.39	↗	↓	V.F.
774		4.19	↘	↖	
775		4.15	↖	↑	
776		4.07	↖	↑	
777		4.06	↘	↓	
778		3.98	↗	↗	
779		3.89	↖	↓	
780		3.85	↗	↓	
781		3.33	↘	↓	
782	21	6.42	↖	↑	SAEVLARES AVGG. Antelope adv. l.; in ex. VI or U.
783		5.12	↘	↑	
784		4.40	↖	↓	
785		4.35	↑	↑	
786		4.25	→	↑	
787		4.07	↖	↑	
788		4.04	↖	↓	V.F. (PLATE VI, 18).
789		4.04	↖	↑	F.; base.
790		3.97	↘	↑	
791	23	3.48	×	↑	SAEVLARES AVGG. Goat adv. l. Base.
792	24c	5.26	↗	↓	SAEVLARES AVGG. Low col- umn or altar insc. COS. III. V.F.
793		4.96	↗	↖	
794		4.64	↖	↓	
795		4.62	↖	↓	
796		4.41	↘	↑	
797		4.10	↘	↓	
798		3.96	↖	↓	
799		3.92	↘	↑	(PLATE VII, 14).

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
800		3.74	↙	↓	
801		3.14	↘	↑	
802	25b	5.11	↙	↓	SAECVLVM NOVVM Temple with statue (Roma) in center of columns.
803		4.27	↘	↑	<i>Oval flan.</i>
804		3.98	↙	↓	
805		3.81	↗	↑	
806		3.76	↙	↑	
807		3.73	↙	↓	
808		3.61	↙	↓	
809		3.46	↗	↓	(PLATE VII, 5).
810	26b	5.65	↘	↗	ADVENTVS AVGG. Philip on horse adv. l. holding spear; r. hand raised.
811		4.94	↗	↓	
812		4.69	↗	↗	
813		4.67	↗	↑	<i>Base.</i>
814		4.57	↗	↑	
815		4.56	↗	↑	
816		4.51	↓	↑	
817		4.42	↘	↓	(PLATE V, 18).
818		4.41	↗	↙	<i>Oval flan.</i>
819		4.23	←	↓	
820		4.08	↘	↓	<i>F.</i>
821		3.93	↘	↓	
822		3.70	↙	↓	
823		3.66	↗	↑	
824	27b	6.17	×	↓	AEQVITAS AVGG. Aequitas stg. holding scales and cornu- copiae.
825		5.47	↗	↓	<i>F.</i>
826		5.06	↙	↑	Aequitas' r. arm raised.
827		4.95	↗	↓	



<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
828		4.87	↖	↓	V.F.
829		4.75	↘	↑	
830		4.62	↗	↓	
831		4.55	↗	↑	F.
832		4.45	↘	↓	Aequitas' r. arm raised.
833		4.41	×	↓	V.F.
834		4.40	×	↓	
835		4.34	↘	↑	
836		4.32	↘	↓	
837		4.29	↘	↑	
838		4.28	↘	↓	V.F.
839		4.26	↘	↓	
840		4.25	↗	↑	
841		4.23	↔	↓	Aequitas' r. arm raised. F.; oval flan.
842		4.15	↗	↓	
843		4.13	↖	↓	Oval flan.
844		4.10	↗	↑	(PLATE VI, 4).
845		4.09	↗	↑	V.F.
846		4.08	↗	↑	
847		4.04	↘	↑	
848		4.01	↖	✓	
849		4.01	↖	↑	
850		3.99	↗	↑	
851		3.98	↘	↓	Aequitas' r. arm raised.
852		3.95	↘	↓	
853		3.93	↘	↓	
854		3.93	↗	↖	Aequitas' r. arm raised.
855		3.92	↗	↑	
856		3.91	↘	↓	V.F.
857		3.91	↗	↑	
858		3.91	↘	↑	
859		3.90	↘	↓	F.
860		3.82	↘	↓	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
861		3.81	↙	↓	
862		3.81	↗	↑	
863		3.78	↑	↑	Aequitas' r. arm raised.
864		3.77	↘	↑	
865		3.75	↘	↑	Base.
866		3.70	↙	↑	Aequitas' r. arm raised.
867		3.68	↗	↓	
868		3.66	↑	↑	
869		3.65	↖	↓	
870		3.53	↓	↓	
871		3.49	↘	↓	
872		3.26	↖	↗	
873	28c	5.10	↖	↓	ANNONA AVGG. Annona stg. holding corn-ears over modius and cornucopiae.
874		5.09	↙	↓	
875		4.90	↘	↓	F.
876		4.90	↘	↑	
877		4.69	↙	↓	
878		4.60	↘	↑	F.
879		4.54	↗	↓	
880		4.47	↙	↓	
881		4.47	↘	↑	
882		4.36	↘	↑	F.
883		4.23	↗	↓	Oval flan.
884		4.07	↘	↓	F.
885		4.05	↗	↑	
886		4.00	↙	↑	
887		3.88	↗	↑	
888		3.86	↗	↑	
889		3.85	↘	↓	
890		3.77	↓	↑	Oval flan.
891		3.52	↙	↓	(PLATE VI, 16).
892		3.30	↗	↓	

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
893	29	3.01	×	↓	ANNONA AVGG. Annona stg. holding corn-ears over prow and cornucopiae.
894		4.90	↙	↑	
895		4.44	↘	↓	
896		4.43	↙	↓	
897		4.32	↗	↓	
898		4.21	→	↑	
899		4.10	↖	↑	<i>F.; oval flan.</i>
900		4.05	↘	↑	<i>Oval flan.</i>
901		3.99	↘	↑	<i>Oval flan.</i>
902		3.90	→	↓	
903		3.86	↗	↑	
904		3.80	↘	↓	<i>Oval flan.</i>
905		3.76	↗	↑	<i>F.</i>
906		5.02	↘	↗	FELICITAS TEMP. Felicitas stg. holding long caduceus and cornucopiae.
907	31	4.60	↘	↓	
908		4.56	↗	↓	
909		4.55	↗	↓	
910		4.50	→	↑	
911		4.46	↘	↑	
912		4.34	↑	↓	
913		4.20	↗	↑	
914		4.08	↗	↓	
915		4.02	↗	↑	
916		3.88	↘	↓	
917		3.71	↙	↓	<i>V.F. (PLATE V, 6).</i>
918		3.42	↙	↑	
919		3.35	↘	↓	
920		4.65	↓	↑	FIDES MILIT. Fides stg. hold- ing two standards.
921	32b	4.56	↗	↓	

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
922		4.56	↘	↙	
923		4.52	↗	↖	<i>Oval flan.</i>
924		4.02	↙	↓	(PLATE V, II).
925		3.97	↘	↑	
926		3.70	↙	↑	<i>Oval flan.</i>
927	33	4.90	↖	↑	FIDES MILIT. Fides stg. holding sceptre and standard.
928	34b	3.92	↖	↓	FIDES MILITVM Fides stg. holding two standards. <i>Base.</i>
929	36b	5.00	↙	↓	LAETIT. FVNDAT. Laetitia stg. holding wreath and rudder.
930		4.73	↗	↑	
931		4.63	↗	↓	<i>F.</i>
932		4.39	↖	↓	
933		4.29	↓	↓	
934		4.24	←	↓	
935		4.12	↙	↓	
936		4.09	×	↓	(PLATE V, 5).
937		4.02	↙	↑	
938		3.98	↖	↓	<i>G.</i>
939		3.95	←	↑	
940	37b	4.49	→	↑	LAETIT. FVNDAT. Laetitia stg. holding patera and rudder; prow.
941		3.83	→	↑	
942	38b	5.33	↙	↑	LIBERALITAS AVGG. II Liberalitas stg. holding abacus and cornucopiae. <i>G.</i>
943		4.95	×	↑	<i>Oval flan.</i>
944		4.91	←	↓	
945		4.88	←	↑	
946		4.79	↖	↑	
947		4.71	←	↓	

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
948		4.68	↘	↑	<i>Oval flan</i> (PLATE V, 15). <i>G.</i> ; base.
949		4.54	↘	↓	
950		4.44	↘	↑	
951		4.36	↗	↓	
952		4.24	↗	↑	
953		4.17	↘	↓	<i>Oval flan.</i>
954		3.61	×	↓	<i>Base.</i>
955	40b	4.82	↗	↓	PAX AETERN. Pax stg. hold- ing branch and sceptre. <i>F.</i>
956	41	4.61	↘	↓	PAX AETERN. Pax adv. 1. holding branch and sceptre. <i>V.F.</i> (PLATE V, 14).
957		4.55	↗	↑	<i>G.</i>
958		4.53	↗	↓	
959		4.45	↗	↓	
960		4.34	↘	↓	
961		4.29	↘	↑	
962		4.25	↘	↓	
963		4.04	↘	↑	
964	42	3.89	↘	↓	PAX AETERNA Pax adv. 1. holding branch and sceptre. <i>F.</i>
965	44b	4.93	↙	↓	ROMAE AETERNAE Roma std. holding Victory and sceptre; shield.
966		4.91	↘	↑	
967		4.88	↘	↓	
968		4.67	↙	↓	
969		4.65	↘	↓	<i>F.</i>
970		4.60	↗	↓	
971		4.55	↘	↓	
972		4.40	↘	↑	
973		4.28	↘	↑	
974		4.26	↘	↑	(PLATE VI, 1).

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
975		4.19	×	↓	
976		4.19	↖	↑	<i>Base.</i>
977		4.17	↙	↑	
978		4.12	↘	↓	
979		4.09	↗	↑	
980		4.07	↗	↓	
981		4.04	↘	↓	
982		4.02	↙	↓	<i>Oval flan.</i>
983		3.94	↘	↑	
984		3.89	↗	↓	<i>Uncleaned wt.</i>
985		3.89	↔	↓	<i>Oval flan; uncleaned wt.</i>
986		3.85	←	↑	<i>V.F.</i>
987		3.83	↖	↓	
988		3.73	↖	↓	
989		3.63	↙	↓	<i>V.F.</i>
990		3.63	×	↑	<i>Oval flan; base.</i>
991		3.60	↗	↓	<i>V.F.</i>
992		3.56	↘	↓	<i>F.</i>
993		2.98	↖	↓	<i>Thin flan.</i>
994	45	5.06	↓	↑	ROMAE AETERNAE Roma std. holding Victory and sceptre; shield, altar. <i>V.F.</i>
995		4.88	↗	↑	
996		4.47	↖	↓	
997		4.29	↙	↓	
998		4.23	↘	↓	
999		4.19	↗	↑	
1000		4.06	↑	↓	<i>Oval flan.</i>
1001		3.97	↗	↑	
1002		3.88	↗	↓	
1003		3.84	↖	↓	<i>F.; oval flan; base.</i>
1004		3.70	↗	↑	
1005	46b	4.78	↗	↑	SALVS AVG. Salus stg. feed- ing held snake.

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
1006	47	4.76	↘	↑	SALVS AVG. Salus stg. holding rudder and feeding snake coiled around altar. (PLATE V, 17).
1007		4.66	↘	↓	
1008		4.52	↓	↓	V.F.
1009		4.42	↑	↑	Oval flan.
1010		4.26	↘	↑	
1011		3.99	↗	↑	
1012	47A	4.44	×	↓	SALVS AVGG. Salus stg. feeding held snake.
1013	48b	4.90	↗	↑	SECVRIT. ORBIS Securitas std. holding sceptre; head on l. hand.
1014		4.74	→	↑	
1015		4.73	↓	↑	F.
1016		4.52	↘	↑	
1017		4.49	↘	↓	
1018		4.38	↘	↓	Oval flan (PLATE V, 3).
1019		4.37	↙	↑	
1020		4.19	↘	↑	
1021		4.13	↓	↓	
1022		4.07	↙	↑	
1023		3.89	↘	↑	F.
1024		3.87	↘	↑	
1025		3.72	↘	↓	
1026		3.52	↗	↓	
1027	49b	5.28	→	↑	VICTORIA AVG. Victory adv. r. holding wreath and palm. F.; oval flan.
1028		4.64	↙	↓	Base.
1029		4.49	↙	↑	
1030		4.47	↙	↑	
1031		4.34	↙	↑	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
1032		4.29	↘	↑	
1033		4.15	×	↑	(PLATE V, 2).
1034		4.12	→	↑	F.
1035		3.85	↙	↑	F.
1036	50	4.64	↘	↑	VICTORIA AVG. Victory adv. l. holding wreath and palm.
1037		3.99	↗	↓	

*Mint of Viminacium*

1038	51	5.14	×	↓	VICTORIA AVGG. Victory stg. holding wreath and palm. (PLATE VII, 18).
1039		4.39	→	↓	
1040		4.18	↙	↑	
1041		4.00	↙	↘	
1042		3.98	↗	↑	G.
1043		3.29	↙	↓	(PLATE VII, 15).

*Mint of Rome*

1044	52	4.60	↘	↙	VIRTUS AVG. Virtus stg. hold- ing branch and spear; foot on helmet. F. (PLATE V, 8).
1045		3.59	↘	↓	
1046	53	4.51	↘	↗	VIRTUS AVG. Virtus std. hold- ing branch and spear; no shield.
1047		4.44	↗	↓	Shield.
1048		4.37	↙	↓	Shield.
1049		4.27	↓	↗	Shield.
1050		4.21	↙	↑	Shield. Base.
1051		4.04	→	↗	Shield.
1052	57	4.75	↖	↑	AEQVITAS AVGG. Aequitas stg. holding scales and cornu- copiae.



Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
1053	58	4.41	↙	↑	(PLATE VI, 5).
1054		4.09	↘	↑	
1055		3.55	↗	↑	F.
1056		4.51	↙	↑	AETERNITAS AVGG. Elephant adv. l.; driver with goad and wand.
1057		4.50	↘	↑	
1058		4.43	×	↑	F.
1059		4.43	↙	↓	
1060		4.31	↖	↓	V.F.
1061		4.17	↙	↓	
1062		3.93	↘	↓	V.F. (PLATE VII, 2).
1063	59	3.89	↙	↓	
1064		3.80	↙	↑	
1065		3.63	↙	↑	Oval flan.
1066		3.63	↘	↑	V.F.
1067		3.48	↗	↑	
1068		4.47	↖	↑	ANNONA AVGG. Annona stg. holding corn-ears over prow and cornucopiae. (PLATE VI, 2).
1069		4.09	↙	↓	Weak strike.
1070		3.85	↗	↙	
1071		3.74	↙	↑	V.F.
1072		3.63	←	↑	F.
1073		2.98	→	↓	Oval flan.

*Mint of Mediolanum (Milan)*

1074	60	5.29	↘	↓	FELICITAS IMPP. in three lines in laurel-wreath.
1075		4.88	↗	↓	V.F. (PLATE VII, 3).
1076		4.83	×	↓	
1077		4.62	↘	↓	
1078		4.30	↙	↑	

Smyrna No.	RIC	Wt.	Dir.	Rev. Die	Rev. Description/Remarks
1079	61	4.09	↗	↑	
1080		3.79	↘	↑	V.F.
1081		4.28	×	↑	FIDES EXERCITVS Fides stg. holding vexillum and standard.
1082		4.20	↘	↑	V.F.
1083		3.98	↗	↓	
1084		3.96	↘	↘	V.F. (PLATE VII, 6).
1085		3.93	←	↑	
1086		3.86	↘	↓	
1087		3.42	↙	↑	

Mint of Rome

1088	62	4.80	↘	↑	FIDES EXERCITVS Four standards. (PLATE VI, 14).
1089		4.32	↘	↑	
1090		4.14	×	↑	
1091		4.12	↘	↑	
1092		4.09	↘	↑	Uncleaned wt.
1093		4.06	↗	↓	
1094		4.03	↖	↓	
1095		4.02	↘	↑	V.F.
1096		3.76	↖	↓	
1097		3.73	↗	↓	V.F.; base.
1098		3.48	↙	↗	
1099					Dispersed

Mint of Mediolanum (Milan)

1100	63b	4.84	↑	↓	FORTVNA REDVX Fortuna std. holding rudder and cornucopiae; wheel. F.; oval flan.
1101		4.72	↙	↘	(PLATE VII, 9).
1102		4.37	↗	↓	

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
II03		4.16	↙	↓	
II04		3.85	↙	↑	

*Mint of Rome*

II05	65	5.54	↓	↑	ROMAE AETERNAE Roma std. holding Victory and spear; shield, altar.
II06		4.48	↗	↓	
II07		4.31	↘	↑	Oval flan.
II08		4.04	↗	↓	F.
II09		3.76	↙	↓	Uncleaned wt.
II10		3.60	↗	↓	V.F. (PLATE VII, 17).
II11		3.54	↘	↓	G.

*Mint of Antioch*

III2	71	4.29	↙	↓	VIRTUS EXERCITVS Virtus stg. holding spear; l. hand on shield; no helmet.
III3		4.22	↘	↓	(PLATE IV. 10).
III4		4.18	↙	↑	
III5	78	4.18	↘	↓	P.M.TR.P.VI COS.P.P. Felicitas stg. holding long caduceus and cornucopia.

## OTACILIA (4)

*Mint of Rome*

III6	125c	4.60	↗	↓	CONCORDIA AVGG. Concordia std. holding patera and double cornucopiae. (PLATE VI, 10).
III7		3.86	↙	↑	

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
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*Mint of Antioch*

1118	127	3.44	↙	↓	IVNO CONSERVAT. Juno stg. holding patera and sceptre. <i>Obv. scraped</i> (PLATE IV, 11).
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*Mint of Rome*

1119	130	3.72	↙	↓	PIETAS AVGVSTAE Pietas stg. holding box of perfume; r. hand raised. <i>V.F.</i> (PLATE VII, 11).
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## PHILIP II (38)

*Mint of Antioch*

1120	213	3.95	↗	↓	IOVI CONSERVAT. Jupiter stg. holding thunderbolt and sceptre.
1121		3.85	↙	↓	
1122		3.72	↗	↓	<i>V.F.</i> (PLATE IV, 12).

*Mint of Rome*

1123	216c	4.24	↘	↙	PRINCIPI IVVENT. Philip II stg. holding globe and sceptre. (PLATE V, 9).
1124		3.98	×	↑	
1125		3.96	↖	↑	
1126	217	4.68	↗	↙	PRINCIPI IVVENT. Philip II stg. holding globe and sceptre; soldier holding spear.
1127	218d	4.75	↘	↑	PRINCIPI IVVENT. Philip II stg. holding globe and standard.
1128		4.62	↘	↑	Globe and spear. <i>V.F.</i>

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
II29		4.52	→	↓	Globe and spear. Same obv. die as No. II36.
II30		4.32	↙	↓	Globe and standard.
II31		4.24	↖	↓	Globe and spear.
II32		3.93	↙	↓	Globe and standard.
II33		3.88	↗	↑	Globe and standard.
II34		3.73	↘	↓	Globe and spear. <i>F.</i>
II35		3.67	↙	↓	Globe and standard. <i>Oval flan</i> (PLATE VI, 7).
II36		3.51	←	↑	Globe and spear. Same obv. die as No. II29; <i>oval flan</i> .
II37		3.28	↗	↑	Globe and standard.
II38		3.19	↗	↓	Globe and spear.
II39		3.14	×	↗	Globe and standard. <i>F.</i>
II40	219	5.13	←	↓	PRINCIPI IVVENT. Philip II stg. holding globe and standard; captive.
II41		3.86	↘	↑	
II42	223	4.08	↗	↙	VIRTVS AVGG. Mars adv. r. holding spear and trophy; in field Γ. (PLATE VII, 7).
II43	224	4.92	↙	↓	SAECVLARES AVGG. Goat adv. l.; in ex. III.
II44		4.06	↙	↓	
II45		4.01	↙	↑	(PLATE VI, 9).
II46		3.59	↘	↓	
II47		3.31	↙	↑	

*Mint of Viminacium*

II48	226	3.96	←	↑	AETERNIT. IMPERI Sol adv. l. holding whip; r. hand raised.
II49		3.84	↙	↑	
II50		3.56	↙	↓	

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
<i>Mint of Rome</i>					
1151	230	5.17	↙	↑	LIBERALITAS AVGG.III Philip I and II std.; Philip I holds short sceptre.
1152		4.16	↘	↑	(PLATE VII, 8).
1153		4.08	↘	↓	
1154		3.84	↘	↓	<i>V.F.; oval flan.</i>
1155		3.77	↗	↓	
1156		3.75	↗	↓	
1157					<i>Dispersed.</i>

## TRAJAN DECIUS (54)

1158	2b	4.06			DACIA Dacia stg. holding staff with ass's head.
1159- 1161	10b	3.64			ABVNDANTIA AVG. Abundantia stg. emptying cornucopiae. ( <i>Av. wt.</i> ).
1162- 1171	11b	4.22			ADVENTVS AVG. Trajan Decius on horse holding sceptre; r. hand raised. ( <i>Av. wt.</i> ).
1172- 1181	12b	3.82			DACIA Dacia stg. holding staff with ass's head ( <i>Av. wt.</i> ).
1182	13	3.96			DACIA Dacia stg. holding standard.
1183- 1190	16c	3.86			GENIVS EXERC. ILLVRICIANI Genius stg. holding patera and cornucopiae; to r. standard. ( <i>Av. wt.</i> ).
1191- 1192	18	3.99			GENIVS EXERCITVS ILLVRICIANI Genius stg. holding patera and cornucopiae; to r. standard. ( <i>Av. wt.</i> ).

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
1193- 1195	21b	3.90			PANNONIAE Two Pannoniae stg. holding standards ( <i>Av. wt.</i> ).
1196- 1203	28b	4.02			VBERITAS AVG. Uberitas stg. holding purse and cornucopia. ( <i>Av. wt.</i> ).
1204- 1208	29c	4.04			VICTORIA AVG. Victory adv. l. holding wreath and palm. ( <i>Av. wt.</i> ).
1209	38a	3.75			GEN. ILLVRICI Genius stg. holding patera and cornucopiae. (PLATE VII, 12).
1210	77	3.18			CONSECRATIO Eagle.
1211	90	3.31			CONSECRATIO Altar.

## HERENNIA ETRUSCILLA (I)

1212	59b	3.61			PVDICITIA AVG. Pudicitia std. holding sceptre; r. hand drawing veil.
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## HERENNIUS ETRUSCUS (II)

1213- 1216	138	3.73			CONCORDIA AVGG. Two clasped r. hands. ( <i>Av. wt.</i> ).
1217	142b	3.91			PIETAS AVGG. Mercury stg. holding purse and caduceus.
1218	146	4.51			PRINCIPI IVVENTVTIS Apollo std. holding branch; lyre.
1219- 1222	147c	3.78			PRINCIPI IVVENTVTIS Herennius stg. holding wand and spear. ( <i>Av. wt.</i> ).
1223	149	3.80			SPES PVBLICA Spes adv. l. holding flower and raising skirt.

<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
HOSTILIAN (3)					
1224	174b	3.29			CONCORDIA AVGG. Two clasped r. hands.
1225- 1226	181d	4.10			PRINCIPI IVVENTVTIS Hostilian stg. holding standard and spear rev. ( <i>Av. wt.</i> ).
TREBONIANUS GALLUS (7)					
1227	31	3.69			ANNONA AVGG. Annona stg. holding rudder upright and corn-ears; prow.
1228	44	3.45			PROVIDENTIA AVGG. Providentia stg. holding globe and sceptre.
1229	48a	3.44			VICTORIA AVGG. Victory stg. holding wreath and palm.
1230	69	4.12			IVNO MARTIALIS Juno std. holding corn-ears(?) and sceptre.
1231- 1233	72	4.17			PIETAS AVGG. Pietas stg., both hands raised; altar. ( <i>Av. wt.</i> ). No. 1233 = <i>V.F.</i>
VOLUSIAN (5)					
1234	179	3.36			PAX AVGG. Pax stg. holding branch and sceptre.
1235	180	3.76			PAX AVGG. Pax stg. holding branch and sceptre; in field star.
1236	205	4.11			FELICITAS PVBL. Felicitas stg. holding long caduceus and cornucopiae.
1237- 1238	206	3.48			VIRTVS AVGG. Virtus stg. holding spear; shield. ( <i>Av. wt.</i> ).



<i>Smyrna No.</i>	<i>RIC</i>	<i>Wt.</i>	<i>Dir.</i>	<i>Rev. Die</i>	<i>Rev. Description/Remarks</i>
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## AEMILIAN (2)

1239	3b	2.51			ERCVL. VICTORI Hercules stg. holding bow; r. hand on club; lion-skin on l. arm.
1240	8	3.73			PACI AVG. Pax stg. holding branch and sceptre; column.

## VALERIAN (4)

1241	92	4.17			IOVI CONSERVA. Jupiter stg. holding thunderbolt and sceptre.
1242	106	3.53			ORIENS AVGG. Sol stg. holding whip; r. hand raised.
1243	248	4.67			PROVID. AVGG. Providentia stg. holding baton and cornucopiae; globe.
1244	271	2.88			VIRTVS AVGG. Soldier stg. holding spear; r. hand on shield.

The Smyrna hoard is important in that it is sizeable enough to afford something of a check on the deductions drawn from the great Dorchester hoard, and yet small enough to permit a rather closer study of certain aspects of the coinage than has heretofore been made. These considerations make possible a fresh examination of the working of the Roman imperial mint system between A.D. 238 and 249. The hoard also gives us a blurry insight or two into the history of Smyrna between 238 and 257, the dates between which it was accumulated. These points will be dealt with in subsequent chapters.

## THE MINTING OF ANTONINIANI UNDER GORDIAN III

One of the principal problems numismatists have still to settle is the organization of the mint of Rome just before the middle of the third century. We are still uncertain as to the number of officinae (sub-sections) which existed at Rome, and the way they were designated, and which of the known coin-types each struck.

For a long time it has been thought that during the reigns of Gordian III and Philip the mint at Rome was organized in six officinae. This hypothesis was reinforced by Mattingly's study of the great Dorchester hoard, in which he found that from Gordian III on, the issues of antoniniani of the Roman mint uniformly contained six reverse types, and that the number of coins of each of the types in any given issue was more or less the same. In Gordian's first issue, for example, the six were represented by 129, 104, 129, 114, 120, and 132 coins. The similarity of these numbers led Mattingly and Sutherland to the firm opinion that there were indeed six officinae at Rome, and that each struck a single reverse type. Each one was Roman in style and fabric, and differed from the other five in exceedingly small and subtle ways. They went on to say, however, that the shades of distinction between these sections were so fine and narrow, that they could not be communicated.<sup>1</sup>

This theory has, admittedly, been followed by a number of important scholars, among them R. A. G. Carson, M. Grant, and P. Le Gentilhomme.<sup>2</sup> The idea also goes back to the work of K. Pink, and especially that of O. Voetter, who in the last century suggested

<sup>1</sup> The Dorchester hoard is described in H. Mattingly, "The Great Dorchester Hoard of 1936," *NC* 1939, 21-61; the numbers of coins in Gordian's first issue are taken from that article, and are duplicated in *RIC* IV.3, 15n. Mattingly's and Sutherland's remarks on the distinctions, *ibid.*, xvi-xvii. See, too, Mattingly in his *Roman Coins*, 2nd ed. (1960), 131; *BMCEmp.* V, xxv, xxvii.

<sup>2</sup> R. A. G. Carson, "System and Product in the Roman Mint," *Essays in Roman Coinage Presented to Harold Mattingly* (1956), 238-239; "The Coinage and Chronology of A.D. 238," *ANSCent. Publ.* (1958), 198; M. Grant, *Roman Imperial Money* (1954), 55; P. Le Gentilhomme, "La trouvaille de Nanterre," *RN* 1946, 24, 29-30.

that the six reverse types of the various issues of Gordian were each of them struck in a single officina, a system whose origins he placed at least as early as the time of Maximinus (A.D. 235–238) and whose use continued into the principate of Philip I (A.D. 244–249).<sup>3</sup>

But in truth, not one of these scholars has adduced much evidence; none has argued that he has detected specific variations in style to support the thesis. There is, therefore, little real evidence that there were six distinct sections of the mint at Rome under Maximinus, Balbinus and Pupienus, Gordian III, and in the first years of Philip. The case, such as it is, rests partly on analogy. In A.D. 248, Philip struck two series of antoniniani, one in six types with the Roman numbers I through VI on the reverses of the coins, the other in six types stamped with the Greek numerals A through Z. These numbers have been universally taken, rightly I think, to represent the officinae numbers. Later on, in the reign of Valerian and Gallienus, the use of similar officinae marks began to become almost regular.<sup>4</sup> The existence of six officinae in the last year of Philip and in subsequent reigns is not evidence, of course, that such existed earlier. The best that can be said is that it creates a possibility that they did.

The other part of the case is the undoubted fact that the Dorchester hoard and other sizeable hoards show a certain similarity of numbers among the six types of each given issue. But to assume on the basis of numbers alone that there were six officinae makes it *a priori* impossible to conceive of the mint as having, say, two officinae each striking three types, or three striking two, or even twelve, with two collaborating on a single reverse type. What is needed is some sort of corroboratory evidence to support the simple fact that there were always six types with more or less similar numbers. And we need some kind of explanation as to why, for a few months, the antoniniani of Philip should have been struck with the numerals one through six upon them.

As is generally known, we have little literary or epigraphical evidence concerning the organization and workings of the Roman mint.

<sup>3</sup> K. Pink, "Der Aufbau der römischen Münzprägung in der Kaiserzeit," *NZ* 1935, 24–25, 29; O. Voetter, "Die römischen Münzen des Kaisers Gordianus III und deren antike Fälschungen," *NZ* 1894, 387, 394–395.

<sup>4</sup> *RIC* V. 1, 15 and n.; *RIC* IV. 3, xvi.

We do have certain evidence that at least two officinae existed at the beginning of the fourth century.<sup>5</sup> But for the time of Gordian III, we have no written evidence at all, and must depend on a study of the coins themselves for whatever deductions we are to make.

The task of separating and identifying the product of the different officinae from the mass of the Roman mintage must be done along fairly rigorous lines. I should make it axiomatic that the officinae, if they actually existed, must have differed from one another in some slight, but nonetheless real, degree, because each one must have been made up of numbers of individual workmen and artisans—*malleatores*, *flatuarii*, *scalptores*—who made the coins entirely by hand. I should make a second assumption, which earlier scholars have also made, and which seems entirely reasonable, that the sections of the mint were of the same size and produced almost exactly the same number of coins in each issue. One might assume that the most important reason the Roman government divided the mint into officinae was to facilitate administrative control over that sizeable organization. As we shall see, the number of officinae bears only a partial relationship to the number of antoniniani actually produced. With administrative reasons, then, paramount, there would be little sense in complicating matters by setting up sub-sections of differing sizes in the mint. Thus, the mint was probably organized along lines that the imperial government had had experience with, notably, with the army. Here, there had been a grouping of the mass of the soldiers into uniform legions for strategic, tactical, and administrative reasons. If the parallel is valid, the mint at Rome would have been the analogue of the legionary field army, provincial mints analogues of the provincial cohorts.

In the reign of Gordian, the imperial mints were located in two principal cities, the chief and most important was Rome, and the secondary was Antioch. The coinages of these two places can be distinguished from one another, and it seems sensible to use the detectable differences between the currencies of these two mints as the starting point for detecting the differences between the coinages of the different officinae at Rome. In a sense, we can think of the small mint at Antioch as one more officina of the whole imperial

<sup>5</sup> *CIL* XIV. 1878, from Ostia mentions "of[f]icina prima."

system. What differences exist between Rome and Antioch, then, should also exist, in greater or lesser degree, between the officinae at Rome.

Between Rome and Antioch, there are five detectable differences:

- 1) reverse types and legends;
- 2) style of obverse portraiture;
- 3) average weights of coins;
- 4) alignment of obverse and reverse dies relative to one another; and
- 5) direction of strike, that is, the direction the blow of the hammer took, as measured by the point of deepest impression (here assumed to be always the heel of the hammer) on the edge of the flan.

The differences of reverse legends between Rome and Antioch, and of their respective styles of portraiture, are well known and need not detain us here. I should, however, stress the fact that the average weights of Antiochene and Roman issues did vary. In the Smyrna hoard the sixty coins of Gordian III struck at Antioch between 242 and 244 have an average weight of 4.394 grams, whereas the contemporary Roman issues of Gordian have an average of 4.354 grams (361 examples). This conclusion is corroborated by Mattingly's findings in the case of the hoard from Plevna.<sup>6</sup> Such a difference of weight between Rome and Antioch existed because the *flatuarii* and *aequatores* in the two mints made and trimmed the blanks by hand, and, therefore, the blanks they prepared differed in weight according to the sum of the actions of the two sets of different personalities involved. Of course, the standard weight of the antoninianus at this or at any other time was fixed by the imperial govern-

<sup>6</sup> Mattingly found that the sixteen examples of the type *ORIENS AVG* (*RIC* 213) of Antioch in the Plevna hoard had a mean weight of 4.67 grams, and that all Roman and Antiochene together one of 4.263 grams (H. Mattingly and F. S. Salisbury, "A Find of Roman Coins from Plevna in Bulgaria," *NC* 1924, 237). The average of coins struck at Rome from Plevna seems low, however, since the average weight of the same issues found at Smyrna is 4.354 grams (361 examples), at Dorchester 4.348 grams (567 examples—H. Mattingly, "The Great Dorchester Hoard of 1936," *NC* 1939, 40); and at the Villa Patrizi 4.38 grams (1,550 examples—A. Segre, *Metrologia e circolazione monetaria degli antichi* [1928], 367-368, n. 7).

ment, but the evidence we have shows that the government was indifferent toward small variations of weight. Perhaps the difference was more or less made up for by the purity of the metal employed, the slightly heavier Antiochene coins having a somewhat smaller percentage of silver than the Roman. I have not been able to find sufficient evidence of silver analysis to insist, however, on this point.<sup>7</sup>

The relationship between the positions of the obverse and reverse dies also differs between Rome and Antioch. At Rome, between 242 and 244, 52.96% of the coins have the relationship  $\uparrow\downarrow$ ; at Antioch, 56.67%. These figures are based on the coins from Smyrna. Lastly, the direction, or impression, of strike also differs, but, again not to any marked degree. At Antioch, the average point (on a clock face) where the deepest impression was made by the hammer was 5.6; at Rome 6.2. This means that at Antioch a bare majority of coins were struck by a hammer wielded from the right side of the axis of the coin (assuming the axis to be  $\uparrow$ ); at Rome, essentially from either side of the same axis.

With these points in mind, we may begin to analyze the coinage of Gordian III. So far as numbers of coins go, I shall use total figures compiled from most of the principal published hoards. This procedure is superior to reliance upon a single hoard, no matter what the size of that hoard may be. I have used altogether twenty-two groups of coins: the hoards from Smyrna, Dorchester,<sup>8</sup> Edlington Wood,<sup>9</sup> Caister-by-Yarmouth,<sup>10</sup> Elvedon,<sup>11</sup> Sully,<sup>12</sup> Lime Street,<sup>13</sup> Couvron,<sup>14</sup>

<sup>7</sup> Of the coins of the first issue of Gordian III in the Smyrna hoard, the heaviest weighed 5.19 grams, the lightest 3.51. By our standards this difference is extraordinary.

P. Le Gentilhomme, "La trouvaille de Nanterre," *RN* 1946, 41, gives analyses of a small number of antoniniani of this period. His results actually show that the coins of Antioch contained *more* silver (and were also heavier) than those from Rome, but the minute number of coins tested (7) seems to me to render this result inconclusive, so that the matter seems still moot.

<sup>8</sup> Mattingly, *NC* 1939, 21-61.

<sup>9</sup> A. S. Robertson, "The Edlington Wood Find," *NC* 1935, 202-207.

<sup>10</sup> G. K. Jenkins, "The Caister-by-Yarmouth Hoard," *NC* 1947, 175-179.

<sup>11</sup> R. A. G. Carson and J. W. Brailsford, "The Elvedon (Suffolk) Treasure Trove," *NC* 1954, 204-208.

<sup>12</sup> H. A. Grueber, "Find of Roman Coins and Gold Rings at Sully, near Cardiff," *NC* 1900, 27-65.

<sup>13</sup> The Lime Street hoard has been reported in three separate articles: J. Evans, "Roman Coins Discovered in Lime Street, London," *NC* 1882, 57-60;

Nanterre,<sup>15</sup> Baalon,<sup>16</sup> Schwarzenacker,<sup>17</sup> an unknown place in Yugoslavia, here NZ 17,<sup>18</sup> Ūsküb,<sup>19</sup> Rustschuk,<sup>20</sup> Nicolaevo,<sup>21</sup> Smederevo,<sup>22</sup> Jagodina-Kruschewatz,<sup>23</sup> Reka-Devnia,<sup>24</sup> and Plevna,<sup>25</sup> and the excavation coins from the Athenian agora,<sup>26</sup> Antioch,<sup>27</sup> and Dura-Europos.<sup>28</sup> The advantage of using this sample of coins instead of a single large hoard is twofold. First, one has a larger number of coins to work with. Second, these twenty-two groups come from several provinces of the Roman Empire, from Mesopotamia in the east to Britain in the west, so that, if a uniform distribution of coin types was ever interfered with for reasons unknown to us, as will appear later actually to have happened, the use of these widely separated hoards should cancel this out insofar as we are able to do so.

I have, furthermore, in compiling totals used the Dorchester figures at only 10% of the actual figures. I have done so because of

"Further Notice of Some Roman Coins Discovered in Lime Street," *NC* 1883, 278-281; and R. Merrifield, "An Unpublished Portion of the Lime Street Hoard Found in 1882," *NC* 1956, 247-254.

<sup>14</sup> A. de Belfort, "Trouvaille de Couvron," *Annuaire de la société française de numismatique* I (1877), 456-460.

<sup>15</sup> P. Le Gentilhomme, "La trouvaille de Nanterre," *RN* 1946, 15-114.

<sup>16</sup> I have not been able to find the original publication of this hoard. The figures are taken from Le Gentilhomme's article on the Nanterre find. See n. 15, above.

<sup>17</sup> M. Bernhart, "Der Münzfund von Schwarzenacker." *Mitteilungen der Bayerischen Numismatischen Gesellschaft* (1914-1915), 67-74.

<sup>18</sup> After the journal reporting it: B. Saria, "Aus dem Belgrader National Museum," *NZ* 1924, 90-96.

<sup>19</sup> W. Kubitschek, "Ein Denarfund aus der Gegend von Ūsküb (Albanien)," *NZ* 1908, 37-54.

<sup>20</sup> N. A. Muschmow, "Münzfunde aus Bulgarien," *NZ* 1918, 43-54.

<sup>21</sup> G. Seure, "Trésors de monnaies antiques en Bulgarie. II. Le trésor de Nicolaévo," *RN* 1923, 111-153.

<sup>22</sup> J. Petrovic, "The Smederevo Hoard," (in Serbian) *Starinar* VI (1931), 32-77.

<sup>23</sup> W. Kubitschek, "Ein Fund römischer Antoniniane aus Serbien," *NZ* 1901, 185-194.

<sup>24</sup> N. A. Mouchmov, *Le trésor numismatique de Réka-Devnia (Marcianopolis). Annuaire du Musée National Bulgare* V (1934).

<sup>25</sup> H. Mattingly and F. S. Salisbury, "A Find of Roman Coins from Plevna in Bulgaria," *NC* 1924, 210-238.

<sup>26</sup> M. Thompson, *The Athenian Agora*. Vol. II. *Coins* (1954).

<sup>27</sup> D. B. Waage, *Antioch-on-the-Orontes*. IV, Part 2. *Greek, Roman, Byzantine, and Crusaders' Coins* (1952).

<sup>28</sup> A. R. Bellinger, *The Excavations at Dura-Europos*. VI. *The Coins* (1949).

the very size of this hoard, which is so large that it would distort the results obtained from the other twenty-one groups. There are some 8,000 coins of Gordian from Dorchester, as opposed to some 6,000 from all the others together. To assume that the Dorchester hoard is typical of the output of the Roman mint is unwarranted. There is *prima facie* evidence that for at least one issue the numbers in the Dorchester hoard are not typical. In issue five, *RIC* 151–153 amount to 418 coins; *RIC* 145–147 amount to only 279. Evidently something is wrong, for to have one putative officina producing as little as two-thirds of another is difficult to understand. Mattingly has suggested that the one began production sooner than the other, but this seems difficult to accept without proof.<sup>29</sup>

Last of all, in dealing with the earlier coins of Gordian III, I have lumped together the coins assigned in the *RIC* to issues one and two. One reason for doing so is to gain larger samples for analysis. It seems to me entirely legitimate, moreover, to proceed thus, since issue two is simply a continuation of issue one, and the two might have been dealt with in *RIC* as issues 1a and 1b, as the third issue of Gordian was dealt with in *RIC* as 3a, 3b, and 3c, instead of as 3, 4, and 5. In the second issue of the *RIC*, the obverse legend remains the same as in the first issue; the style and fabric of the coins remain the same. This last point is illustrated in columns two and three (PLATE I). The reverse types remain the same, *RIC* 1 being continued as *RIC* 15, 2 as 16, and so on. The reverse legend only is changed. *RIC* 3 was PAX AVGVSTI; *RIC* 17 became P.M. TR.P. II COS. P.P., but the type of the latter was still Pax. So far as the *aes* of these two issues are concerned, the second issue actually continues the types struck in the first.<sup>30</sup>

The distribution of the twelve reverse types of the first two issues of Gordian III among the twenty-two finds is detailed in Table 1. From the results of this tabulation, two classes of coins may be designated: one whose total numbers are above 210, and one whose total numbers are below.

<sup>29</sup> In *RIC* IV, 3, 3on.

<sup>30</sup> *RIC* IV. 3, 5.



TABLE 1

<i>RIC</i>	1,15	2,16	3,17	4,18	5,19	6,20	TOTAL
Smy	12	14	7	19	19	13	84
Dor	16	14	16	16	15	17	94
E W	1	1	0	2	1	1	6
C-Y	3	1	1	1	2	1	9
Elv	3	3	3	0	0	1	10
Sul	0	0	1	2	0	3	6
L S	2	2	4	6	3	2	19
Cou	5	1	1	4	0	2	13
Nan	11	14	15	13	12	16	81
Baa	21	12	18	10	10	16	87
Sch	35	32	27	28	33	33	188
N Z	7	6	10	8	5	9	45
Üsk	1	3	1	4	9	3	21
Rus	2	1	0	0	1	0	4
Nic	6	6	2	7	6	11	38
Sme	46	43	45	62	58	67	318
J-K	0	0	1	3	2	0	6
R-D	18	23	14	30	25	18	128
Ple	10	8	15	12	10	17	72
Dur	4	3	7	1	2	7	24
Ant	0	0	1	0	0	0	1
Ath	0	0	0	0	1	0	1
TOTAL	203	187	189	228	214	237	

The average weights of these types in the Smyrna hoard, with these total numbers from the twenty-two groupings, are as follows:

<i>RIC</i> 1,15	4.355 grams	203
<i>RIC</i> 2,16	4.364 grams	187
<i>RIC</i> 3,17	4.231 grams	189
<i>RIC</i> 4,18	4.602 grams	228
<i>RIC</i> 5,19	4.364 grams	214
<i>RIC</i> 6,20	4.113 grams	237

From these figures, it seems that we are probably dealing with three groups or sets of coins. Because, if we match numbers of coins with average weight of coins, we find that where one type is represented by more than 210 coins, there is another type of generally similar weight represented by less than 210 coins, and that the three sets thus made are each of them roughly identical in number. Thus, the lightest pair, *RIC* 6 and 20, 4.113 grams, have 237 examples (more than 210), and *RIC* 3 and 17, the second lightest pair (4.231 grams) have 189 examples (less than 210). Combined, the four types in this set have 426 coins. Second, *RIC* 4 and 18, 4.602 grams, the heaviest types, have 228 examples, and seem to be associated with *RIC* 2 and 16, which have the second heaviest average weight (4.364 grams) and the low number of 187 examples. Together, the coins of this group total 415. Third, the remaining *RIC* 5 and 19 (4.364 grams, 214 coins) and *RIC* 1 and 15 (4.355 grams, 203 examples) together amount to 417 coins.

The evidence of style of obverse portraiture when combined with the above evidence, makes for excellently converging results; we do appear to have three unique sets: *RIC* 2 and 16, and 4 and 18; *RIC* 1 and 15, and 5 and 19; and *RIC* 3 and 17, and 6 and 20. Each set exists in about the same numbers, has a distinctive average weight, and each has peculiarities of obverse portraiture, to be discussed below. We shall also see that each set has its own unique relationship of obverse to reverse die alignment and of direction of strike, so that these three sets fulfill the five prerequisites for officinae outlined above.

The peculiarities of style are seen in the different ways different engravers made the details of Gordian's face and head. Obviously, all the coins look more or less like Gordian, but details do differ. These include the relationship between the size of his neck and the size of his head; his chin, whether jutting forward or recessed; the lines (if any) around his nose and mouth; the exact shape given the back of his head; the way the mouth itself is shown; his nose, whether pointed or blunted; the line that runs from the end of the nose up to the hairline; and, last, the lettering around the portrait. Although all coins within one set do not have all these characteristics rendered with consistent uniqueness when compared to all the coins of the

other two sets, the coins in the groups do tend to portray several of the characteristics uniquely and more or less consistently uniquely.

Three coins, representative of the individual style of each officina, are illustrated here in enlargement. The general style of each group may be noted through a description of the pertinent details. Coins of the first group, *RIC* 2, 16 and 4, 18, render the following details of Gordian's portrait in about the same way, whereas the coins of the other two groups differ in most details.

In figure 1, which shows a coin of type *RIC* 4 (Smyrna No. 68), the portrait has a rather slender neck (A), on which is set a large cranium. There is a line (B), which represents the crease around the emperor's mouth (missing in figure 2), which runs right down from his nose toward his chin, and the line is nearly straight (curved in figure 3). Lips (D), nose (E), and bridge of nose (F) show no special characteristics in this officina, but a point on which the officina does differ from the other two is that the back of Gordian's neck and head (G) is made with a smoother and more graceful line than by the others. The lettering is large, firm, and neat.

On the other hand, the coins of group *RIC* 1, 15 and 5, 19, here represented in figure 2 by an enlargement of an *RIC* 1 (Smyrna No. 37), share different peculiarities in many of these facial characteristics. Here, the neck (A) is a good deal heavier than before; there is no crease (B) around the mouth; the chin (C) is somewhat recessed, and the upper lip (D) overhangs the lower quite obviously. The nose (E) is larger, more nearly straight, and with a fine tip. The back of the head (G) is more sharply rounded. The lettering has nothing especially distinguishing about it.

Last, the coins of group *RIC* 3, 17 and 6, 20 (figure 3) from which there is an enlargement of an *RIC* 6 (Smyrna No. 86), have lettering that is neat and small. Figure 3 does not show this point well, but see *RIC* 6, Smyrna No. 89 (PLATE I). Again, the emperor's neck (A) is heavier than in group one, but about the same as in group two. The crease (B) around the mouth is shown (usually not in group two), but it is more curvilinear than in group 1. The chin (C) is not recessed as in figure 2, and it is stronger and more bulbous than in figure 1. The lips (D) are pursed and of roughly even length; in other coins of this group the purse becomes a pout. The nose (E) is sharp



FIG. 1.  
(*RIC* 4, Smyrna No. 68)<sub>1</sub>



FIG. 2.  
(*RIC* 1, Smyrna No. 37)



FIG. 3.  
(*RIC* 6, Smyrna No. 86)



and pointed (in some coins quite obviously so). The line from the tip of the nose up across the forehead (F) is a more graceful curve than in the coins of the two other groups, with less of a break at the bridge. I should add that among the coins of this group one occasionally meets a portrait (it is not illustrated) with a unique quality about it: the style is almost archaic Greek, with strong nose, bulging eye, and curved, half smiling lips. So far as the coins in the Smyrna hoard are concerned, this striking style is always found associated with only two reverse types in any one issue.

These three peculiar styles of Gordian's portrait-bust are also evident in PLATE I. There, the coins are grouped in three sets horizontally, as well as in vertical columns. The two top rows, the two middle rows, and the two bottom rows—each set of two rows represents the product of one of the three officinae at work in Rome. Comparison of the coins of each horizontal set in column one will also illustrate the various styles as outlined above.

Now, these styles tend to shade off into one another, and in PLATE I this tendency is also illustrated. Compare column one with column two. This comparison shows that, coin for coin, the same reverse type is associated with an obverse with varying style of portraiture. For example, the two bottom coins have rather dissimilar chins. I point this out to emphasize that style of portraiture cannot always be used alone as a certain criterion for distinguishing officinae. Differences between obverses linked with the same reverse type existed because there were a number of individuals making dies for each section of the mint, and these men each produced his dies with simple hand tools. No man could produce dies identical with those of his colleagues, or even two of his own dies that were exactly alike. The most that a man could do—and no doubt often did—was to make dies that had a very strong similarity to other dies made by himself or his fellows. That is, therefore, the most we can hope to demonstrate. It is also entirely possible that some die-makers were transferred from one officina to another for whatever reasons of expediency or necessity. If the argument for three officinae was based on the single criterion of style, instead of on the cumulative, interlocking arguments set forth above, it would be necessary to prove that there were die links between the reverses of *RIC* 2 and 4, 1 and 5,

and 3 and 6. Unfortunately I have been able to find no such links in the Smyrna hoard. In fact, there are only two pairs of coins struck from the same obverse dies among all the coins of Gordian, and one pair among Philips'. Die-linkage among the antoniniani is rather uncommon; even in a great hoard like the Dorchester, Mattingly found only something like five per hundred among the coins of Philip I, a very large proportion compared with other finds. This led him to suppose that the hoard might have been a private bank which received its currency fresh from the mint.<sup>31</sup> The Smyrna hoard, on the other hand, was a gradual accumulation of coins taken from general circulation at random, and this almost assures the absence of die-linkage. But, speaking generally, it is exceedingly unlikely that the same obverse die would have been used with different types of reverse dies in one of the officinae. Production of the two reverse types had to be regulated, and teams of *malleatores* and *suppostores* must have been assigned to the production of a single reverse type. This would have been the economical and sensible means of preventing haphazard production. Therefore, once the dies were made and placed in the officina's anvils, probably enclosed in the little iron boxes that C. C. Vermuele has argued were used to hold them, striking went on, a certain obverse die always matched with a certain reverse die, until they were worn out and replaced.<sup>32</sup>

The style of obverse portraiture, moreover, changed; even when a single man might be involved continuously in making dies. There is undoubted evidence that such occurred, and, therefore, one reverse type could easily be associated with a variety of obverse styles. The fact is especially clear in respect to coins belonging to the first issue of Gordian. While those coins were being fabricated, the *scalptores* had to change from portraying Balbinus and Pupienus, rather old men, to portraying Gordian, a mere youth. In the coins of type *RIC* 5, for example, Gordian's portrait begins to be made with features unmistakably those of an old man, but as time goes on, it becomes more nearly an exact rendering of Gordian, and a charming portrait develops, one which Mattingly has aptly characterized as "the young

<sup>31</sup> Mattingly, *NC* 1939, 38–39.

<sup>32</sup> C. C. Vermuele, *Some Notes on Ancient Dies and Coining Methods* (1954), 40–44.

head on old shoulders."<sup>33</sup> These differences, in some cases rather wide differences, are the ones shown in columns one and two in Plate I.

What was true of one man, in one officina, was true of the officina as a whole. No doubt, men who worked together in one section would tend to develop a certain number of more or less common habits in portraying parts of a bust. They would tend to have a number of characteristics in common that men of another officina would not share with them. This is what the evidence of column two in Plate I shows. Therefore, within limits, the dies of one officina can be distinguished from those of another. But the whole problem of separating and identifying the product of any one section of the mint cannot be solved by means of studying styles of dies alone, as the foregoing remarks are intended to prove. We must use in conjunction the evidence of numbers produced and the evidence of fabric, which includes the very important criterion of average weight.

Returning, then, to a statistical analysis of the antoniniani of Gordian, an arrangement of the mint in a three-officina system is much superior to an arrangement in six. The results obtained from the three-officina arrangement make the smallest officina produce at a rate 97.41% of the largest, a difference of 2.59%.<sup>34</sup> The three-officina system, moreover, allows of considerably more nearly equal results between sections in the smaller hoards. We should not expect even here to find the enormous discrepancies that the six-officina hypothesis gives us, in view of B. Thordeman's work with the Lohe hoard. He found by comparing the numbers of coins unearthed with the records of the Swedish mint that the hoard faithfully reflected the known production.<sup>35</sup> Table 2 shows the results obtained by

<sup>33</sup> In *RIC* IV. 3, 8.

<sup>34</sup> Using the figures from Dorchester alone, the following results obtain for the six-officina system:

<i>RIC</i> 1,15	162 coins
2,16	141
3,17	162
4,18	164
5,19	148
6,20	169

That is to say, the putative officina producing *RIC* 2 and 16 worked at 83.4% of the rate of the officina producing *RIC* 6 and 20, a difference of 16.6%.

<sup>35</sup> B. Thordeman, "The Lohe Hoard," *NC* 1948, 188-204.



the application of the three-officina system to the small hoards in our sample.

TABLE 2

Offi- cina	<i>RIC</i>	EW	C-Y	Elv	Sul	LS	Cou	NZ	Üsk	Rus	Nic	J-K	Dur
I	I, 15	I	3	3	0	2	5	7	I	2	6	0	4
	5, 19	I	2	0	0	3	0	5	9	I	6	2	2
	TOTAL	2	5	3	0	5	5	12	10	3	12	2	6
II	3, 17	0	I	3	I	4	I	10	I	0	2	I	7
	6, 20	I	I	I	3	2	2	9	3	0	11	0	7
	TOTAL	I	2	4	4	6	3	19	4	0	13	I	14
III	2, 16	I	I	3	0	2	I	6	3	I	6	0	3
	4, 18	2	I	0	2	6	4	8	4	0	7	3	I
	TOTAL	3	2	3	2	8	5	14	7	I	13	3	4
GRANDTOTAL		6	9	10	6	19	13	45	21	4	38	6	24

The results of this tabulation are interesting; the assignment of the various types to these officinae evens out the differences between types. This is particularly true in the case of the Nicolaevo find, where, out of a total of thirty-eight coins, the six types are present in such diverse numbers as "2" and "11"; but, on the three-officina system, the thirty-eight are almost exactly distributed in thirds. We must not, of course, insist on absolute equality of numbers. We have to deal with a method of production based on hand work. More importantly, these numbers are based on only the principal types produced by the mint for mass issue, and contemporaneously with these twelve types there are a few others made in very small numbers, such as *RIC* 14, VOTIS DECENNALIBVS, or the coins in the series *RIC* 27-33.

There is, moreover, an undoubted connection between the numbers of coins produced, as known from this sample of twenty-two finds, and the average weights of the types, as known from the Smyrna hoard. It would seem that each of the officinae was assigned a weight of silver to be changed into currency. The weight of antoniniani of issue 1/2 of Gordian is indicated by officinae in table 3.

TABLE 3

Officina	RIC	Ave. Wt.	No.	Wt. of Coinage
<b>I</b>	I, 15	4.335	203	1,818.120 gr.
	5, 19	4.364	214	
	TOTAL	4.360	417	
<b>II</b>	3, 17	4.231	189	1,770.030 gr.
	6, 20	4.113	237	
	TOTAL	4.155	426	
<b>III</b>	2, 16	4.364	187	1,867.915 gr.
	4, 18	4.602	228	
	TOTAL	4.501	415	

It would appear that in these issues, there were under Gordian III three officinae, and that each struck two types, not six striking one as heretofore supposed. It follows that each struck one "major" and one "minor" type. Why this should have been so we have no certain means of telling. Probably, the "major" types were the most important from the point of view of the coinage reflecting the propaganda of the government. We know that the government did use the reverses of the currency to inform the people of the empire as to policies that the emperor was pursuing at any particular time, to advertise the existence of beneficial conditions in the empire—whether real or imaginary—or to announce great military victories. The government undoubtedly felt that certain of its messages were more important than others. Thus, in issue 1/2 of Gordian, the types PROVIDENTIA AVG, VICTORIA AVG, and VIRTUS AVG, which have in common praise of the emperor's thirteen-year-old person, were struck on a larger scale than FIDES MILITVM, IOVI CONSERVATORI, or PAX AVGVSTI. It seems, therefore, that the advertisement of the imperial prowess of Gordian was itself more important than honoring Jupiter or the army or the peace of A.D. 238.

It is extremely likely that these three officinae were designated by numbers, even if numerals do not appear on the coins. All the information we have of officinae in the third century points in this direction. At Rome, under Philip, they were numbered I through VI in Latin numerals, and A through Z in Greek. At Antioch, the offi-

cinae were distinguished by the same Greek letter-numbers, and also by a number of dots. Under Gallienus, they were indicated sometimes by Roman numerals, sometimes by the letters P, S, T, and so on, standing for *prima*, *secunda*, *tertia*, and so on. The inscription from Ostia cited above mentions "*officina prima*." We might also assert the parallel usage in identifying the legions and auxiliary formations of the army, all of which bore numbers. Therefore, the officinae ought to have been numbered under Gordian and during the first years of Philip as I, II, and III. For the moment, I shall simply arbitrarily say that I struck 1, 5, 15, and 19; II, 3, 6, 17, and 20; and III, 2, 4, 16, and 20. Suffice it to say here, that I shall trace the continuity of these three officinae until A.D. 248, when there were six numbered officinae, and when I come to that issue, then I shall justify the numbers assigned here.

The validity of all the foregoing arguments rests, in part, on whether the same set of circumstances of style, weight, and numbers existed for the remaining issues of Gordian. Perhaps, too, we shall find that the three officinae, whose existence has been argued for, consistently produced coins with roughly the same constant percentages of reverse dies  $\downarrow$  and  $\uparrow$ , in relation to the obverse, as well as exhibiting a more or less constant direction of strike. So far as this is concerned, I shall now only state what the percentages and average direction of strike were for the officinae for issue 1/2.

TABLE 4

Officina	$\uparrow\downarrow$	Direction
<b>I</b>	61.29%	4.3
<b>II</b>	25.00%	4.5
<b>III</b>	45.45%	5.3

Having examined the properties of the three officinae in issue 1/2, we may now proceed to issue 3. I shall handle all the sub-issues, designated 3a, 3b, and 3c by Mattingly and Sutherland, together. In this issue, the average weights of the six types again allow a division into three sets of two each, and the average weights of these sets remain almost exactly the same as they were in the preceding

issue. Furthermore, in two of the pairs, there is again a "major" and a "minor" type. Last of all, the numbers of coins in the twenty-two groups are in each case almost the same, as is the weight of coinage produced. These numbers are shown in table 5; the grouping of types is indicated in table 6.

TABLE 5

<i>RIC</i>	34, 51, 63	35, 52, 64	36, 53, 66, 67	37, 54, 68, 69	38, 55, 70	39, 56, 71	TOTAL
Smy	26	23	25	26	27	27	154
Dor	28	27	30	30	28	27	170
E W	3	1	2	1	2	0	9
C-Y	3	3	2	6	1	4	19
Elv	3	8	4	1	3	3	22
Sul	2	2	0	2	0	1	7
L S	13	6	5	11	5	9	49
Cou	2	1	1	3	3	6	16
Nan	33	20	23	23	28	25	152
Baa	16	20	17	29	32	34	148
Sch	68	63	44	76	56	56	363
N Z	13	12	19	18	10	16	88
Üsk	9	7	4	11	5	5	41
Rus	1	0	2	1	1	2	7
Nic	9	8	7	9	5	5	43
Sme	94	64	70	86	83	75	472
J-K	2	0	0	1	0	4	7
R-D	12	13	13	17	11	14	80
Ple	25	14	14	13	16	13	95
Dur	2	4	4	2	5	0	17
Ant	0	0	0	1	0	0	1
Ath	0	2	0	0	0	1	3
TOTAL	364	298	286	367	321	327	

The amount of greatest difference between officinae under this arrangement is that between I and III, 79.767 grams of metal. This is a good deal less than the greatest difference between sections of Mat-

5\*

tingly's arrangement: one hundred seven coins. In other words, in the latter system the smallest officina produced 83.76% as many coins as the largest; under this new arrangement, the smallest struck 97.98% as many as the largest.

TABLE 6

Officina	<i>RIC</i>	Ave. Wt.	No.	Wt. of Coinage
I	39, 56, 71	4.335	327	2,807.913 gr.
	38, 55, 70	4.329	321	
	TOTAL	4.332	648	
II	34, 51, 63	4.289	364	2,828.726 gr.
	35, 52, 64	4.255	298	
	TOTAL	4.273	662	
III	37, 54, 68	4.416	367	2,886.913 gr.
	69			
	36, 53, 66	4.426	286	
	67			
	TOTAL	4.421	653	

Furthermore, the style of obverse portraiture shared by the two types of each pair is exceedingly close, in fact, even closer than in issue 1/2. The resemblances are particularly striking between *RIC* 54, Smyrna No. 199, and *RIC* 53, Smyrna No. 197. This extreme similarity probably came about because by this time the die-cutters had refined and more-or-less standardized their portraits of the emperor, instead of having to make dies in rapid succession for Maximinus, Pupienus and Balbinus, and Gordian in that year of upheaval, 238. Similarities of the obverses are illustrated in the horizontal rows of Plate II.

These three groups, moreover, show absolute continuity of style from the groups of issue 1/2, each set of characteristics being associated with coins of the two issues of similar average weight. Officina I produced *RIC* 38, 39, 55, 56, 70 and 71. The emperor's neck is made somewhat thicker than in the other two sections, and the head rests on it more solidly. The back of the head has a jog where the radiate crown goes around it, and there is a rather deeper indentation at the

bridge of the nose than there is with the other two. The nose itself is handled in such a way that it is large but blunt at the end, and the upper lip is long. From the nostril, a line curves round into the chin, which is not so sharp and pronounced as is customary with the other two officinae. The lettering is undistinguished.

*RIC* 34, 35, 51, 52, and 63 through 65 were produced by Officina II. The neck, again, is thick, and the back of the head has the smooth line running down into the neck. The line running down the emperor's forehead into his nose, however, curves gracefully without much indentation at the bridge. The nose itself is strong, sometimes pointed, sometimes not. It is not blunt. The line running from the nostril to the corner of the mouth is curved. The chin shows a much more pronounced jawbone than is the case with I, which makes for a bulbous effect in contrast with the pointed treatment it receives in III. A few coins have pouting lips. The lettering is consistently small, sometimes being quite neat and precise. The work of the "archaic-engraver" is sometimes in evidence, as in *RIC* 34, Smyrna No. 117.

Officina III, producing *RIC* 36, 37, 53, 54, and 66 through 69, tends to make necks slender, and top them with a large cranium. The back of the head is made to curve down gracefully into the neck. There is a normal break at the bridge of Gordian's nose, and the nose itself is long and usually pointed. Occasionally, a straight line is found running from the nose to the corner of the mouth, and the lips most often pout. The chin is sharp and bony, and rather pointed. The lettering in the legends is generally neat, sometimes small, but normally rather large.

So far there is great continuity with the characteristics of the officinae in issue 1/2. But when we investigate the proportions of reverse dies ↓ and ↑, as well as the average direction of strike, there is some but not complete continuity. This means, I think, that so many new *malleatores* and *suppostores* have been taken on by the mint for this issue, that the work-habits of these new individuals alter the proportions observed for the old individuals. There can be no doubt that there were new men involved with the production of the third issue, since the number of coins manufactured per month rose strikingly over the old one. Issue 1/2 was struck during a period of about seventeen months, from near the beginning of August, 238,

until the end of December, 239. The third issue was struck during the following year. These dates are not precise, but do well enough for our present purpose.<sup>36</sup> Issue 1/2 is represented by 946 coins in the Dorchester hoard, or by an average accumulation of fifty-six coins a month. Issue 3 is represented by 1,688 coins, an average accumulation of 141 coins per month. In other words, the rate of production went up to somewhere between double and treble the previous rate. Naturally, the mint required more workmen, and these new men show their presence by the altered proportions of obverse to reverse alignment, and in the differing direction of strike. The proportions are shown in table 7.

TABLE 7

Issue	1/2	3	1/2	3
Officina	%↑↓	%↑↓	Direction	Direction
<b>I</b>	61.3	54.7	4.3	4.4
<b>II</b>	25.0	51.0	4.5	4.4
<b>III</b>	45.5	60.0	5.3	4.2

Since these figures show so much variance between issues, I regard them as useless in tracing the continuity of the officinae, and shall disregard them subsequently.

We now arrive at the very large fourth issue, the one that was contemporary with the arrival of Timesitheus as Praetorian Prefect. His influence was very wide-spread in the government as a whole, and doubtless affected the working of the mint. We can show that the following changes were effected. First, production of antoniniani at Rome was somewhat reduced. From the Dorchester hoard, coining is seen to have been about four-fifths the rate of the previous issue.<sup>37</sup> But this was offset by the reopening and thorough reorgani-

<sup>36</sup> That there is a close correspondence between the accumulation of coins in a hoard and the actual number of coins produced is shown by B. Thordeman, *NC* 1948, 188-204. I think he overstates his results, but the general conclusion as I have said it is undoubtedly true.

<sup>37</sup> The approximate length of time during which this issue was struck was thirty-two months. The issue is represented by 3,700 coins at Dorchester, an average accumulation of 116 a month, as compared to the 141 of issue 3.

zation of the mint at Antioch, which now commenced to produce large issues of money with a new style of portraiture which Mattingly has well characterized as "assimilated to Roman style and usage."<sup>38</sup> The nature of this change is such that it probably involved an actual transfer of personnel from Rome to Antioch, a point to be examined presently.

The numbers of coins of the six types of this issue are indicated in table 8.

TABLE 8<sup>39</sup>

<i>RIC</i>	83	84-85	86	87-90	91-94	95	TOTAL
Smy	41	50	45	38	39	32	245
Dor	58	65	61	65	66	55	370
E W	6	4	3	4	3	4	24
C-Y	7	8	2	4	3	3	27
Elv	4	10	7	6	9	8	44
Sul	2	3	5	2	2	2	16
L S	5	11	9	15	9	14	63
Cou	3	8	5	9	8	8	41
Nan	39	31	29	47	55	58	259
Baa	35	43	35	37	48	34	232
Sch	106	112	114	134	94	127	687
N Z	16	25	21	17	37	19	135
Üsk	18	12	15	13	21	21	99
Rus	0	6	1	3	1	2	13
Nic	19	19	15	9	18	25	105
J-K	0	5	1	5	10	3	24
R-D	3	16	0	0	0	0	19
Ple	40	28	34	34	35	39	210
Dur	18	19	17	12	11	18	95
Ant	1	0	0	2	1	1	5
Ath	2	3	2	0	1	2	10
TOTAL	423	478	421	456	471	474	

<sup>38</sup> In *RIC* IV. 3, 1-2, 36.

<sup>39</sup> The Smederevo hoard is omitted from this table, since the number of coins, type *RIC* 83, was left out of the report, no doubt on account of careless printing.



These numbers help to show that, as in the case of previous issues, this one was minted in three officinae. Officina I produced *RIC* 85, 84, and 86; II produced 83 and 91-94; and III was responsible for 87-90 and 95.<sup>40</sup> The evidence is that these coins reflect the characteristics of the same three officinae working earlier. So far as style of portraiture is concerned, the only important change is that Gordian is made to look a bit older than he perhaps would appear at about the time of his marriage to Sabinia Tranquillina—partly by means of a mustache and beard, partly by making his face more mature. But the same peculiarities in the rendering of neck and head, nose and chin, and mouth and lettering, appear as before.

These continuing traits are matched with coins of almost nearly the same average weight as those of issue 3. The numbers of coins of each of these three sets are about the same.

TABLE 9<sup>41</sup>

Officina	<i>RIC</i>	Ave. Wt.	No.	Wt. of Coinage
I	85,84	4.411	478	3,933.125
	86	4.334	421	
	TOTAL	4.375	899	
II	91-94	4.279	471	3,798.606
	83	4.219	423	
	TOTAL	4.249	894	
III	95	4.429	474	4,155.240
	87-90	4.474	456	
	TOTAL	4.468	930	

A word about the differences in numbers of total coins minted. As we shall see later, the total numbers of coins produced by each

<sup>40</sup> *RIC* 85 was struck for only a short time, and was then superseded by *RIC* 84, which remained current until the end of the issue. This is apparent from the portraits of 85, which, so far as I have been able to discover, never pictured the emperor with beard or mustache. This hairy decoration, however, is common on *RIC* 84.

<sup>41</sup> P. Le Gentilhomme ("La trouvaille de Nanterre," *RN* 1946, 34-35) reports somewhat different average weights for these six types. I have disregarded his results, however, because he did not weigh and report all of the coins at his disposal, and does not say what his principle of selection was.

of the officinae during Gordian's whole reign was almost identical. But in this fourth issue, there is a larger discrepancy than obtained in either issue 1/2 or 3. Officina III, the largest, is represented by thirty-six more coins than II, the smallest; in issue 3 the greatest difference was only fourteen. It is likely that Officina III began production of coins of issue 4 about the same time as the other two, but continued production a bit longer while the other two went over to the types assigned them for issue 5. Officina III is ninety-two coins short of II in the fifth issue, and one hundred eight short of I, so that Mattingly's suggestion that the officinae did not always begin to produce at precisely the same time is probably correct.<sup>42</sup>

A consideration of the contemporary production of the mint at Antioch is in order. Mattingly and Sutherland observe that the mint seems to have been organized in three sections, and that between 242 and 244 this branch of the Roman system struck off two issues, one small one, *RIC* 209, 212, and 214, and a second large one, *RIC* 210, 213, and 216.<sup>43</sup> I think that this was the case, and would even go a bit further, and suggest that this mint was created on the Roman model, and that personnel were transferred from Rome to Antioch to staff each officina, each related to one of the Roman ones. The branch struck two issues, the first a small one consisting of *RIC* 209, *FIDES MILITVM*; 212, *MARTI PACIFERO*; and 214, *PAX AVG-VSTI*. A larger issue followed from the same three officinae, respectively, as shown by similarity of style: 210, *FORTVNA REDVX* (no wheel); 213, *ORIENS AVG*; and 216, *SAECVLI FELICITAS*.

The evidence of relationship to the Roman officinae lies partly in the average weights of the coins made at Antioch. *RIC* 209 and 210 average 4.525 grams; 212 and 213 4.374 grams; and 214 and 216 4.290 grams, all only a little bit heavier than the respective weights observed as in use by the three officinae in Rome.

More precisely still, what seems to have happened is that while engravers and blank makers were transferred, the reconstituted mint at Antioch had to depend on local strikers. The evidence for the engravers is that the three sets of coins show very similar details in comparison with the three sets of the contemporary fourth and

<sup>42</sup> In *RIC* IV. 3, 30n.

<sup>43</sup> *RIC* IV. 3, 13, 36-37.

fifth issues of Rome. This is illustrated in the middle of Plate IV, where, in the left-hand column, I have placed coins from the fifth issue of Rome, and in the middle and right-hand columns coins from Antioch. The similarity of styles will be at once obvious, and also the continuity of the three traditions of portraiture we have been noticing in the Roman issues. The similarity of average weight indicates the probability that Roman flan makers were also sent to Antioch.

The evidence that local men were used to strike the coins is that the relative positions of obverse and reverse dies and the average direction of strike show the usual divergences from any previously observed practice. Exactly the same thing occurred in Rome in the transition from issue 3 to issue 4. The proportions of reverse die down to reverse die up change noticeably, as does the average point of impression of the striking hammer. Of course, with the fluctuating amount of coinage struck, as well as normal replacement of unskilled labor, it was necessary for a mint always to be changing its personnel, and these men naturally produced coins reflecting their own skills or lack of them, and their own individual characteristics.

The fifth and last issue of Gordian at Rome contained no fewer than seventeen different reverse legends, there being a progression from long to short form of six basic types.<sup>44</sup> Again, we find that the numbers of coins, average weights, and elements of style we have been considering make three pairs as shown in tables 10 and 11.

The criterion of style still operates. Officina I has the usual large nose and the usual crescent line running from the nostril toward the point of the chin. There is the break at the back of the head, where the crown is bound around it. Officina II has a smooth line along the back of Gordian's head, usually small, neat lettering, and a pointed nose. The "archaic-engraver" seems to have died by this time. Officina III produces coins with a smooth line from forehead to the tip of a long, strong nose. Similarly, there is a smooth transition along the line running from the back of the head down to the neck. There is only a short line from the nostril to the corner of the mouth, and the chin is sharply pointed. The total production of each officina throughout the reign of Gordian III is indicated in table 12.

<sup>44</sup> P. Le Gentilhomme, *RN* 1946, 32.

TABLE 10<sup>45</sup>

<i>RIC</i>	140-142	143-144	145-147	148-150	151-153	154-156	TOTAL
Smy	19	19	13	19	26	20	116
Dor	33	35	28	37	42	29	204
E W	2	7	1	4	4	2	20
C-Y	2	4	7	3	7	3	26
Elv	5	9	4	4	1	5	28
Sul	1	5	0	3	2	1	12
L S	2	8	8	7	13	8	46
Cou	6	10	3	2	4	9	34
Nan	24	15	20	21	28	26	134
Baa	25	30	22	29	24	21	151
Sch	52	60	51	71	49	62	345
N Z	7	11	9	12	10	14	63
Üsk	6	10	2	8	11	3	40
Rus	1	3	0	2	1	0	7
Nic	11	22	6	6	6	6	57
Sme	85	88	73	90	84	82	512
J-K	2	0	3	3	1	2	11
Ple	13	22	18	20	22	21	116
Dur	17	0	14	12	19	14	76
Ant	0	0	0	0	1	0	1
Ath	0	2	3	0	1	2	8
TOTAL	313	360	285	350	356	330	

<sup>45</sup> This table contains some slight inaccuracies which cannot be avoided. First, for the Smederevo hoard, published by J. Petrovic in *Starinar* VI (1931), the number of coins given for *RIC* 144 is eighty-six. This number is so much larger than the number of coins of the other types of this issue that I have regarded it as a typographical error for "thirty-six." The article was not well printed, the number of coins for *RIC* 83 being altogether omitted.

Second, in making up the figures for *RIC* 144, FORTVNA REDVX (wheel), I have had to make changes in the published numbers in certain finds. For example, in the case of the Plevna hoard, there is a total of thirty-one coins reported for type 98 of the now out-dated catalogue of Cohen. This type is now divided into *RIC* 144, FORTVNA REDVX (wheel), struck at Rome, and *RIC* 210, FORTVNA REDVX (no wheel), struck at Antioch. On analogy with the proportions in the Dorchester and Smyrna hoards, I have divided the thirty-one coins of the Plevna hoard into five *RIC* 144 and twenty-six *RIC* 210. Similar adjustments have been made for other finds reporting C. 98, but complete accuracy will be lacking.

TABLE 11

Officina	<i>RIC</i>	Ave. Wt.	No.	Wt. of Coinage
<b>I</b>	143-144	4.441	360	
	154-156	4.319	330	
	TOTAL	4.378	690	3,020.820
<b>II</b>	148-150	4.230	350	
	151-153	4.234	356	
	TOTAL	4.232	706	2,987.792
<b>III</b>	140-142	4.482	313	
	145-147	4.486	285	
	TOTAL	4.484	598	2,681.432

TABLE 12

Officina	1/2	3	4	5	TOTAL
<b>I</b>	417	648	899	690	2,654
<b>II</b>	426	662	894	706	2,688
<b>III</b>	415	653	930	598	2,596

Officina III, the one with the smallest production, is 96.58% of II, the one with the largest. This is a small difference, and it is made even smaller if the average weights of the coins struck are multiplied by the numbers of coins struck to arrive at the weights of currency actually minted.

TABLE 13

Officina	Ave. Wt.	No.	Wt. of Coinage
<b>I</b>	4.363	2,654	11,579.402
<b>II</b>	4.241	2,688	11,399.808
<b>III</b>	4.464	2,596	11,588.544

Here, the smallest officina, II, is 98.37% of III, the largest. I is 99.92% of III.

Last, if these weights of metal are multiplied by the average silver content of each officina, taken from Le Gentilhomme's analyses of coins in the Nanterre hoard, the results are almost as close.<sup>46</sup>

<sup>46</sup> The analyses are given in his article, "La trouvaille de Nanterre," *RN* 1946, 36-37. To arrive at the average silver content of the coinage of each officina,

TABLE 14

Officina	Ave. Anal.	Wt. of Silver
I	40.47%	4,686.184 gr.
II	40.13%	4,574.743 gr.
III	39.54%	4,582.110 gr.

Officina II, with the least weight of silver, is 97.62% of I, the heaviest. On the other hand, II is 99.84% of III. Although the results are not quite as close as in the weight of metal, these numbers are still closer than the simple number of coins.

What this shows, I think, is that the organization of the mint outlined above is correct and that the mint at Rome was indeed organized in three officinae during the reign of Gordian III. Each of these officinae was self-contained, and struck coinage in all three metals. This fact emerges from the arrangement of the currency in bronze, gold, and other denominations of silver which parallel the antoniniani.

TABLE 15

Off	RIC	Au	Q	D	S	Dup	As
Issue 1/2							
I	I, 15	×	×		×	×	×
	5, 19	×	×		×	×	×
	TOGETHER	×	×		×	×	×
II	3, 17	×			×	×	×
	6, 20	×					
	TOGETHER	×			×	×	×
III	2, 16	×			×		×
	4, 18	×			×		×
	TOGETHER	×			×		×

I have established first the weight of silver struck in each officina by multiplying the weight of each coin by the percentage of silver, adding up these weights of silver, and dividing this result by the total weight of the coinage. Unfortunately, Le Gentilhomme gives analyses for only forty coins of Gordian. L. C. West, *Gold and Silver Coin Standards in the Roman Empire*, NNM 94, reports twenty-two antoniniani of Gordian III as 41.7% fine, but does not identify the coins by type.

Off	RIC	Au	Q	D	S	Dup	As
Issue 3							
<b>I</b>	39, 56, 71	×	×		×	×	×
	38, 55, 70	×	×		×	×	×
	TOGETHER	×	×		×	×	×
<b>II</b>	34, 51, 63	×			×	×	×
	35, 52, 64, 65	×			×	×	×
	TOGETHER	×			×	×	×
<b>III</b>	37, 54, 68, 69	×	×		×	×	×
	36, 53, 66, 67	×		×	×	×	×
	TOGETHER	×	×	×	×	×	×

Issue 4							
<b>I</b>	85, 84	×	×	×	×	×	×
	86	×		×	×	×	×
	TOGETHER	×	×	×	×	×	×
<b>II</b>	91-94	×		×	×	×	×
	83	×	×	×	×	×	×
	TOGETHER	×	×	×	×	×	×
<b>III</b>	95	×	×	×			×
	87-90	×	×	×	×	×	×
	TOGETHER	×	×	×	×	×	×

Issue 5							
<b>I</b>	143-144	×			×		×
	154-156	×			×		×
	TOGETHER	×			×		×
<b>II</b>	148-150	×			×		
	151-153	×			×		×
	TOGETHER	×			×		×
<b>III</b>	140-142	×	×		×	×	×
	145-147	×			×		×
	TOGETHER	×	×		×	×	×

From table 15, it is apparent that each of the three officinae struck in all three metals with great consistency. It holds true with almost the same consistency that each struck the major denominations in all three metals as well. There are a few exceptions to this: each struck aureii in all issues except 3c, when Officina I struck gold quinarii instead. Quinarii, in fact, were minted by I rather frequently, III sometimes assisting. Officina II struck quinarii only for issue 4.

All three struck sesterces with complete regularity, and usually dupondii and asses, or one or the other, with nearly the same regularity. This sustains the observation of R. A. G. Carson that since we have nowhere a specific statement that at Rome there were separate establishments for the minting of bronze coins and coins of precious metals, such separate establishments did not exist.<sup>47</sup>

The organization of the mint in three officinae appears to be older than the time of Gordian, and to have existed at least when the second issue of antoniniani was struck in the joint reign of Balbinus and Pupienus (A.D. 238). I feel somewhat diffident in saying this, since I can give no evidence from style or average weight, the Smyrna hoard having only four coins of the joint emperors. But, nonetheless, I should like to venture a few observations regarding the state of the mint in their time. When they began to issue antoniniani (the first issue's silver was denarii), the mint seems to have had three officinae, each one shared by the two men, more or less equally. This hypothesis differs from the currently accepted one, which holds that there were six officinae, each emperor controlling three.<sup>48</sup> But

<sup>47</sup> R. A. G. Carson, "System and Product in the Roman Mint," *Essays in Roman Coinage Presented to Harold Mattingly* (1956), 230. See, also, S. B. Platner and T. Ashby, *A Topographical Dictionary of Ancient Rome* (1929), s.v. *Domus Aurea*.

<sup>48</sup> For the content of the issues of Balbinus and Pupienus I follow R. A. G. Carson, "The Coinage and Chronology of A.D. 238," *ANSCent. Publ.*, 197-8.

The current hypothesis is mentioned by Carson (op. cit., 196), who, it is true, does not specifically say that he believes in six officinae for the second issue, but who does, with some doubts, for the first issue. He also accepts six for the first issue of Gordian III, which immediately followed the second of Balbinus and Pupienus. The existence of six officinae is also accepted by P. Le Gentilhomme, "La trouvaille de Nanterre," *RN* 1946, 29-30. His statements are not supported by evidence other than appeal to the authority of Matting-



from the scant statistical evidence at our disposal, it would seem that the three officinae organization fits the statistical and what stylistic evidence I have seen in books rather well. The organization would be as in table 16, the numbers of coins being taken from the same finds as before.

TABLE 16

Emperor	<i>RIC</i>	Reverse	No.
Balbinus	10	CONCORDIA AVGG	19
Pupienus	12	PATRES SENATVS	14
TOTAL			33
Balbinus	11	FIDES MVTVA AVGG	11
Pupienus	10	CARITAS MVTVA AVGG	18
TOTAL			29
Balbinus	12	PIETAS MVTVA AVGG	9
Pupienus	9	AMOR MVTVVS AVGG	20
TOTAL			29

This arrangement, from the point of view of numbers alone, is a good deal more satisfactory than one based on the six officinae of the past, which would have to account for the vast difference in production between one section represented by nine coins (Balbinus, *RIC* 12), and one represented by twenty (Pupienus, *RIC* 9). It also has the virtue of fitting the literary evidence which speaks of the mutually suspicious nature of these two men. Herodian says that

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ly's article on the Dorchester hoard. There, the case rests on the untested assumption that one reverse legend means one officina.

My opinion that only three officina were used to strike the second issue of Balbinus and Pupienus is, perhaps, supported by what little information we have for the first issue. In it, the *aes* coinage almost certainly did not come from six officinae, since there were only five main reverse types struck. Only one of these, incidentally, appears associated predominantly with a single emperor, and even it (PAX PVBLICA) was not *exclusively* Balbinus'. As A. M. Woodward has shown, the reverse dies of the *aes* were actually shared in varying degrees by the two men. As far as the parallel issue of silver denarii is concerned, we seem, again, to have only three and not six main types, so that my notion that only three officinae were working and were shared by the two men perhaps holds good for the first issue, as well as the second. (The information on the first issue used here is from Carson, *op. cit.*, 195-6).

each was jealous of the other and desired to become sole ruler, information which is substantiated by the Augustan History.<sup>49</sup>

This apportionment of the six types also goes very well with the organization I have made for the first issue of Gordian III. It is known that there is considerable continuity between the last coins of the co-emperors and the first coins of the boy-emperor, as is plainly evident from the elderly quality of some of the earliest portraits of Gordian. Mattingly has observed that *RIC* 1, 2, and 6 of Gordian have been influenced by the portraiture of Pupienus, *RIC* 3, 4, and 5 by that of Balbinus.<sup>50</sup> Since I have assigned Gordian's *RIC* 1, 2, and 6 to each of the three officinae, and *RIC* 3, 4, 5 each to a different officina, this criterion of style would seem to confirm that there were in fact three officinae before Gordian became emperor.

All the foregoing has been set forth to justify the hypothesis that the mint at Rome, from 238, when the Senate succeeded in killing the tyrant Maximinus and in conferring the principate upon two of its members, until 244, when Gordian was murdered by the usurper Philip, was organized in three sections, each striking gold, silver, and *aes*. I should now like to suggest that each of the officinae was controlled by one of the *Triumviri Monetales*. This may not hold true for any other period of the empire; further research, reign by reign, must be carried out. But, this hypothesis has also been suggested for a much earlier period by C. M. Kraay. To be sure, K. Pink feels that under the empire, while the *triumviri* doubtless continued to exist, nonetheless their office had become a mere archaic decoration.<sup>51</sup> However that may be for other periods, it is likely that in this time of senatorial resurgence under Balbinus, Pupienus, and Gordian III, if the office had indeed lost real significance earlier, it was re-established and played a part in the control of the mint. There is really no compelling evidence one way or another. But the institution existed, and men listed it in the *cursus*

<sup>49</sup> Hdn. VIII. 8. 4; *SHA Max. et Bal.* XIV. 1, 4.

<sup>50</sup> H. Mattingly, "The Great Dorchester Hoard of 1936," *NC* 1939, 47; and with C. H. V. Sutherland in *RIC* IV. 3 (1949), 15n.

<sup>51</sup> C. M. Kraay, *The Aes Coinage of Galba*, *NNM* 133, 30-31. For the *triumviri* see, now, K. Pink, *The Triumviri Monetales and the Structure of the Coinage of the Roman Republic* (1952), 8, 56-57, 63, 66.

*honorum* engraved on their funeral monuments, so that it would appear to have had some importance. The complete title, too, deserves to be stressed, that is, *Triumvir Monetalis Aere Argento Avro Flando Ferivndo*. Since we find that each officina did strike in all three metals, the title does fit the fact of actual production. Also, there were three men and three officinae.

Therefore, the organization of the mint in 238 may have been as follows. At the head of the whole financial organization was the secretary *a rationibus*, directly under the emperor himself. Responsible to this high official was the *procurator monetae*, who was in direct charge of the mint. The technical side of production was in the hands of an *optio et exactor*. His orders came from the procurator. The latter also probably gave orders to the *triumviri*, each of whom was in administrative charge of one officina. If their duties were the same as in the days of the Republic, they were responsible for having dies made, for turning metal into a certain number of coins, and for delivering the money to the *fiscus*. The actual work was performed by a staff of *scalptores*, *flatuarii*, *aequatores*, *malleatores*, *suppostores*, and *officinatores*. Most of these men, and the *optio et exactor*, were freedmen or slaves; the *triumviri*, however, were members of the ruling class of the empire. The latest dated inscription attesting the existence of the office, *CIL*. 3850, is the *cursus honorum* of a man who was first *triumvir* and finally consul in A.D. 235.<sup>52</sup>

The important workmen in the mint were the *scalptores*, who cut the dies, and the *aequatores*, who trimmed the blanks used for striking. The evidence of the variability of positioning the dies of

<sup>52</sup> This paragraph on the organization of the mint owes much to H. Mattingly in *CAH* XII (1939), 714-715, and in his *Roman Coins*, 2nd ed. (1960), 129-131. R. A. G. Carson, "System and Product in the Roman Mint," *Essays in Roman Coinage Presented to Harold Mattingly* (1956), 227-239, has written an excellent review of the ancient evidence. See, too, K. Pink, *The Triumviri Monetales and the Structure of the Coinage of the Roman Republic* (1952), especially 56-57, 63; K. Menadier, "Die Münzen und das Münzwesen bei den Scriptoribus Historiae Augustae," *ZN* 1914, 1-144; R. Mowat, "Le bureau de l'Équité et les ateliers de la Monnaie impériale à Rome," *NZ* 1909, 87-116; S. B. Platner and T. Ashby, *A Topographical Dictionary of Ancient Rome* (1929), s.v. *Iuno Moneta*. H. Strasburger in *RE* VII-A<sup>1</sup>, 515-518, s.v. *Triumviri*, lists the inscriptions mentioning *triumviri*, to which K. Pink, op. cit., adds a few.

the axis of strike shows that the *malleatores* (strikers) and *suppostores* (positioners) were taken on by the mint and released according to the needs of the moment. I have discussed this above.

It appears, therefore, that at Rome during the reign of Gordian III the mint functioned in three officinae, each separate, distinct, and self-contained, each striking in the three usual metals, and each managed by a *triumvir monetalis*, under the ultimate supervision of the *procurator monetae*.

## THE MINTING OF ANTONINIANI UNDER PHILIP I

Before proceeding to investigate the organization of the mint at Rome in the reign of Philip, I wish to make some remarks about the content of his issues of antoniniani. I think that in general Mattingly's and Sutherland's assignment of specific coins to the different issues is correct, but on several points I feel it is necessary to deviate from the arrangement. Mattingly himself has remarked that only the general arrangement was satisfactorily made, and that several details of his system were still open to question.<sup>1</sup>

Mattingly has assigned *RIC* 48b, *SECVRIT ORBIS*, to both the first issue and the second. His reason for doing so is that the numbers of *RIC* 46b, *SALVS AVG* (standing right), together with *RIC* 47, *SALVS AVG* (standing left), in the Dorchester hoard are not enough to fill an officina.<sup>2</sup> Therefore, the same officina continued in this issue and the next to strike 48b. His method, again, assumes that the numbers of these two types in Dorchester are in accurate proportion to the actual output of the mint, whereas in fact they are not. Dorchester is short of these two, as their representation in other hoards shows (see table 17).

The other hoards, then, show more or less equal numbers as usual distributed among these six types. Furthermore, the styles of obverse portraiture of *SECVRIT ORBIS* and the two *SALVS AVG* types are quite different, as Plate V shows. *RIC* 48b has a short face with small lips and tight mouth; the other two have tall, narrow faces. Actually, the types were struck in different officinae. Last, for one design to have been used as a type for mass coining in two separate issues would have been without precedent for this period. These considerations taken together indicate decisively that *RIC* 48b belongs to issue 2 alone. A date later than that of 46b and 47 is attested by the older, heavier face of the emperor on *SECVRIT ORBIS*.

<sup>1</sup> In *RIC* IV. 3, xviii, 57-59.

<sup>2</sup> *RIC* IV. 3, 56-57.

TABLE 17<sup>3</sup>

<i>RIC</i>	Dor	Smy	Nan	Sch	Ple	Sme	TOTAL
32 b, 33, 34 b	147	9	12	22	7	37	131
35 b, 36 b, 37 b	172	13	10	27	7	39	140
40 b, 41, 42	158	10	14	20	6	30	119
46 b, 47	47	8	7	25	10	37	117
49 b, 50	170	11	11	19	9	42	136
52, 53	151	8	10	23	5	26	114

This shift, however, leads to a difficulty in the second issue, since the six types already included in it by Mattingly and Sutherland do not require the addition of a seventh. But if we study the numbers of these seven types, we may note peculiarities.

TABLE 18<sup>4</sup>

<i>RIC</i>	Dor	Smy	Nan	Sch	Sme	Ple	TOTAL
26 b	155	15	8	25	49	7	143
31	151	14	6	22	42	12	136
38 b	178	13	12	32	44	11	161
48 b	167	14	8	26	45	13	151
51	75	6	10	5	69	8	124
123 c	166	0	19	29	44	15	163
215, 216 c	141	3	13	22	34	6	120

<sup>3</sup> The figures for Dorchester in this table are actual, not reduced to 10%. The other tables in this chapter will, however, except where noted, report Dorchester at only 10% (see p. 56). The figures for the other hoards are taken from the same sources as used in the last chapter. The Reka-Devnia hoard no longer appears, since by the reign of Philip it had been buried. Nor does the Baalon hoard, because I have been unable to find a published report of its contents.

It should also be noted that the figure given under "Total" includes the coins in the smaller hoards, e.g., from Elvedon or Lime Street, although these hoards are not specifically listed in the table. The total number is therefore not a total of only the six hoards named in the table. The same thing obtains for tables 18-20.

<sup>4</sup> In this table, *RIC* 119b, 120b, 121, and 122b are included with *RIC* 123c.

The figures for Dorchester are actual. The total figures, however, include Dorchester at only 10%, and the other nineteen groups used in this chapter.

Table 18 shows that the type *RIC* 51, *VICTORIA AVGG*, does not really belong to this issue. It is present at Dorchester in only half the amount of the other coins; in Schwarzenacker it is about a fifth as numerous. On the other hand, its representation in the Smederevo hoard is one and a half to two times greater than that of the other six types. These peculiarities make it impossible to assign this coin to the second issue.

Besides banishing *RIC* 51, *VICTORIA AVGG*, from issue 2, I have made one other change in Mattingly's and Sutherland's arrangements. That is to assign *RIC* 217, 219, and 220b, *PRINCIPI IVVENT* and variants, to the third issue. This is a small point. I have done so on analogy with the general aspect of the second issue: that is, except for Otacilia's coins, the other four types were not accompanied by variants in any appreciable quantity at all. Such were, however, common to all six types of the third issue. It seems to me, also, that the portraits of the three variants look enough older than the basic *RIC* 216c to warrant shifting them forward to share the third issue with *RIC* 218d. Perhaps, however, one of them does belong to this issue.

For the third issue, except for this change in Philip II's coinage, I follow Mattingly and Sutherland.

The fourth issue, however, and the seventh, present difficulties. At some time, Philip had struck the type *RIC* 62, *FIDES EXERCITVS* (four standards), which Mattingly and Sutherland have assigned to the last issue of this emperor. I should say that these coins belong to the fourth issue, because the numbers of them found in hoards show that the volume of production was more like that of the other types assigned to this series, as shown in table 19.

The eighty-six coins of *RIC* 65, *ROMAE AETERNAE*, seem too many for issue four, so that I exchange this type for *RIC* 62. The legend of *RIC* 65, furthermore, is more in keeping with the basic theme of the propaganda of the seventh issue, which began to be struck in the thousand and first year of Rome's long continuity. Other coins of the series celebrated the new *saeculum* and the *aeternitas* of the regime. The number of coins of type *RIC* 65, does in fact, match rather well the numbers of the other five main types of the seventh issue, as shown in table 20.

TABLE 19<sup>5</sup>

<i>RIC</i>	Dor	Smy	Nan	Sch	Sme	Ple	TOTAL
5, 6	73	8	5	7	20	5	68
57	83	4	6	18	21	7	70
59	91	6	9	15	25	5	82
62	113	12	10	14	17	2	76
65	94	5	11	18	26	4	86
129	80	0	5	13	13	5	53
227, 231c	119	0	9	15	29	5	82

TABLE 20<sup>6</sup>

<i>RIC</i>	Dor	Smy	Nan	Sch	Sme	Ple	TOTAL
24c	135	10	8	26	12	8	99
25b	88	8	6	12	32	6	86
58	93	12	5	17	17	4	80
60	37	7	0	5	4	1	23
61	42	7	3	7	12	1	42
63b	34	5	3	6	9	3	30
65	94	5	11	18	26	4	86
130	114	1	9	28	17	11	93
226	39	3	10	6	22	4	65
230	111	7	8	17	27	8	89

The ten types listed in table 20 show a range in number from twenty-three to ninety-nine. Of these, however, four, *RIC* 60, 61, 63b, and 226, certainly form a group apart from the rest, and have, moreover, such a peculiar distribution among the hoards, that they certainly do not belong to the seventh issue. We shall set them aside for the moment, for with the types *RIC* 24c, 25b, 58, 65, 130, and 230, we have a normal issue of six. The eighth issue of Mattingly and Sutherland thus disappears, since the four types just excluded from the seventh issue do not make a normal Roman issue. In fact, *RIC* 226 cannot be assigned, as Mattingly and Sutherland suggested, to a

<sup>5</sup> See n. 4 above, for the Dorchester figures.

<sup>6</sup> See n. 4 above, for the Dorchester figures.



late issue at all. The obverse legend is IMP M IVL PHILIPPVS AVG, which was in use only earlier in the reign, in 246 and 247, that is, between the earliest coins of Philip II, whose legends include the title CAES, and the last ones, which have the short title IMP PHILIPPVS AVG.

To solve the problem of the five types which do not fit into the normal Roman system, let us begin with RIC 51, VICTORIA AVGG. As remarked earlier, the distribution of coins of this type shows extraordinary peculiarities. The number in the Smederevo hoard is a very large percentage of that in Dorchester, a most unusual 92.00%. Normally, the percentage is a good deal smaller, falling somewhere between 32.15 and 20.63% in the seven Roman issues. The Smederevo hoard probably does contain a somewhat larger than usual number of this type, as shown by comparison with other Balkan hoards: NZ 17, Üsküb, Nicolaevo, Jagodina-Kruschewatz, and Plenva, have 33.33% as many as Smederevo. It is usual for these smaller Balkan hoards to vary between 80.00 and 52.54% of Smederevo. But, these small hoards show the same relation to Dorchester that Smederevo does. They are, at 30.67%, about twice as large as is customary, for the normal relationship varies between 18.82% and 13.11%. The Dorchester hoard does not have, in this case, an excessively small representation. Comparison with small British hoards, the ones from Edlington Wood, Caister-by-Yarmouth, Elveden, Sully, and Lime Street, shows that these combined have 1.45% of Dorchester's number. In the seven issues they fluctuate between 5.85% and 2.41%.

Evidently, something is radically different about this type. The statistics show that Britain as a whole did not receive as many coins proportionately as did the Balkan provinces. The same was true also for Gaul and Germany. Smederevo is 1,380.00% of Schwarzenacker. In the normal Roman issues the ratio varies between 168.42% and 103.05%. Much the same is true of Nanterre: Smederevo has 690.00% of the French hoard, the normal figure lying between 405.06% and 250.00%.

All this indicates, then, a place of minting other than Rome, and, in view of the large numbers of RIC 51 in Balkan hoards, a Balkan origin. It is difficult, however, to assign the coins to some particular

mint, in view of the paucity of the evidence. There were two Balkan mints of some consequence functioning in Philip's reign, Viminacium in Upper Moesia, which began to strike in copper in A.D. 239, and the provincial mint of Dacia, which began to operate in A.D. 246. The former is the more likely place. In this city was located the mint of the rebel Pacatianus, who rose against Philip in A.D. 248. He actually had struck here very rare antoniniani picturing himself, of course, on the obverse, but with Philip's VICTORIA AVGG on the reverse.<sup>7</sup> Nothing is more plausible than that when Pacatianus began to issue silver at Viminacium, he should use reverse dies already in the mint until he could have his own made.<sup>8</sup>

The style of *RIC* 51 is undoubtedly Roman, but it seems to me that there is a certain eclecticism that sets it off from the main issues of the capital. I have pictured two of these coins in Plate VII, column 3. Occasionally the emperor's chin protrudes beyond his lips. Smyrna No. 1039 has a sharp break at the back of the head and small, neat lettering. No. 1040 has the smooth line from forehead to nose; otherwise, the coins from Smyrna show a break at the bridge of the nose. Smyrna No. 1038 pouts; the others do not. There is here admittedly little resemblance with the local product of either Viminacium or the provincial mint of Dacia.<sup>9</sup> But that makes little difference, for the Roman style antoniniani of Antioch bear only a little resemblance to the local billon. The eclecticism of these coins probably means that this mint was operated with *scalptores* drawn from the three officinae in the capital, or, perhaps, with men drawn from Antioch, whose production of antoniniani declined greatly in volume from A.D. 245 on.

<sup>7</sup> The coin (called a hybrid by Mattingly) is Pacatianus, *RIC* 7 (C. 8). Literature on the mint at Viminacium includes the *Catalogue of Greek Coins in the Hunterian Collection*, University of Glasgow, I, ed. G. Macdonald (1899), 406–408; F. S. Salisbury and H. Mattingly, "The Reign of Decius," *JHS* XIV (1924), 18–23; G. Elmer, "Die Münzprägung von Viminacium und die Zeitrechnung der Provinz Ober-Moesien," *NZ* 1935, 35–43; K. Pink, "Antioch or Viminacium," *NC* 1935, 94–113; and B. Saria, "Viminacium," *RE* XVI (2e Reihe, 1958), 2172–2181.

<sup>8</sup> For what it may be worth, the mint at Viminacium had issued copper for Gordian III in 244, with the legend VICTORIA (G. Elmer, *NZ* 1935, 38).

<sup>9</sup> Coins of Viminacium and the provincial mint of Dacia are pictured in *Catalogue of Greek Coins in the Hunterian Collection*, I (1899), pl. XXVII, 10–11,

The date of this coin is ca. 245-247. It was probably struck contemporaneously with issues 3 and 4 of the mint of Rome. The obverse legend, IMP M IVL PHILIPPVS AVG, prevents a later date. The occasion for its having been issued at all is doubtless to be sought in the invasion of the Carpi, which began in 245. The coinage of Viminacium, then, would support the army concentrated in Moesia under the command of the emperor to repulse the barbarians' attacks. The general scheme would have been to copy the method employed for the mint at Antioch, itself intended to maintain the army gathered to fight the Persian War of 242-244.

Associated with this type was a coin of Philip II, *RIC* 226, AETERNIT IMPERI. Its legend is a complement of the father's: VICTORIA brings the lastingness of the state. This type is distributed among Balkan hoards in rather the same proportions as *RIC* 51. Smederevo in this case has a normal number of this type, as shown by the smaller Balkan hoards amounting to 72.72% of the large one. Dorchester is also normal, the small British hoards having 2.56% of the large one. Smederevo, then, has 56.41% of Dorchester; the five small Balkan hoards 41.03%. Smederevo is 220.00% of Nanterre; it is 366.67% of Schwarzenacker. The date of this coin can be rather accurately fixed. It falls between 246, when Philip Junior became Augustus, and 247, when his coins gave up the long obverse title, IMP M IVL PHILIPPVS AVG, in favor of the shorter, IMP PHILIPPVS AVG. Since the volume of Philip's Balkan coinage was twice that of his son's, the type probably was not issued until the end of 246 or the beginning of 247, when the Carpi began to withdraw from the empire.

Finding places for *RIC* 60, 61, and 63b among the various issues of Philip is also difficult. H. Mattingly was unsure that he had solved this problem satisfactorily, and felt that placing these three types with *RIC* 226 and two of the seventh issue as an eighth issue was uncertain.<sup>10</sup> As already noted, *RIC* 226, AETERNIT IMPER cannot belong to this issue, since the obverse legend is that of the middle

<sup>10</sup> H. Mattingly, *RIC* IV. 3, 59. The numbers of *RIC* 61 and 62 found at Dorchester were 42 and 113 respectively, according to Mattingly's article in *NC* 1939, 25. The numbers are reversed in the *RIC*, which has numerous printer's slips.

and not of the last years of the prince. The impression made by the prince's portrait is also one of youth. If we remove this coin from the arrangement, then, the number of coins of Philip II for both the seventh and the hypothetical eighth issues falls to 111, much behind the 155 of *FIDES EXERCITVS*, so that the whole arrangement, for which Mattingly claimed, indeed, nothing more than plausibility dependent mainly on the Dorchester numbers, cannot stand.<sup>11</sup>

Yet, these three types are related in some way because of the similarity of the volume of each.<sup>12</sup> They do have the point in common of being present in Dorchester in numbers of 37, 42, and 34 coins. In this case the Dorchester hoard is, again, representative of the actual output of these coins. Its numbers compare very well, type by type, with the usual percentage established against other hoards. The distribution of these coins in some important hoards is shown in table 21.

TABLE 21<sup>13</sup>

<i>RIC</i>	Percentage of Dorchester				
	Nan	Sch	Sme	Balk	Smy
60	0.00	13.51	10.81	2.70	18.92
61	7.14	16.67	28.57	9.52	16.67
63b	8.82	17.65	29.41	8.82	14.71

Here we have a rather different state of affairs than met with before. Smyrna is much inflated over its usual 5% to 10% ratio toward the Dorchester hoard. This would suggest, again, a non-Roman origin. The Smederevo hoard, except for *RIC* 60, is a normal fourth of Dorchester, so that one should expect a point of origin rather near the capital. The small Balkan hoards, on the other hand, are much smaller than usual. The scant numbers of these three types in the important Plevna hoard, one, one, and three respectively, show that this place was cut off from the mint by the Carpi. Ūsküb, in southern Yugoslavia, has none of these types, probably for the same reason. One Balkan find with large numbers is hoard

<sup>11</sup> In *RIC* IV. 3, 59.

<sup>12</sup> See Table 20, p. 87, where totals of 23, 42, and 30 are listed.

<sup>13</sup> "Balk" means the usual small Balkan hoards.

NZ 17, but unfortunately its provenance is unknown.<sup>14</sup> Representation in Gaul, as known from Couvron and Nanterre, is very good.

We can explain these phenomena by positing a location able to export its product both to the western Balkans and to France and the Aegean. Mediolanum (Milan), a mint city in the reign of Decius (A.D. 249–251), would satisfy these requirements. Its position as a road center in northern Italy would allow of its coinage reaching Gaul in respectable quantities through the passes of the Alps and up the river valleys so as to be hoarded in such places as Couvron and Nanterre, as well as going eastward across the Isonzo into the Balkan provinces. The Aegean regions, actually, also readily received coins from Milan. The excavations of the Athenian agora have produced sixty-one identifiable antoniniani of the emperors from Hostilian to Valerian. Of these ten came from Milan. The proportion in the Smyrna hoard is even greater. Of the twenty-one coins of these same emperors nine, nearly half, are from Milan. The other twelve are Roman. Of the former, one, Smyrna No. 1233, is virtually uncirculated.<sup>15</sup>

There is historical justification for establishing a mint in such a place as this, for there was a strong tendency at this time to open mints near places where military operations were in progress; and from 246 on, troops were stationed in northern Italy. In that year, near Petra Pertusa there was brigandage and a force had to be deployed to cope with it. A contingent of *auxilia* was stationed at Concordia, and a *vexillum* of Legio XIII Gemina at Aquileia, probably to block that important gateway to Italy against Gothic raiders.<sup>16</sup> This whole concentration would seem, after all, to have been intended as a backstop for those troops actually fighting the Carpi, who had succeeded in breaking through the frontier defenses in 245 and in ravaging Moesia in 246. This incursion must temporarily have disturbed communications between Italy and the Danubian

<sup>14</sup> B. Saria, "Aus dem Belgrader National Museum," NZ 1924, 91. Does its being in Belgrade imply discovery in northwestern Yugoslavia?

<sup>15</sup> Athens: M. Thompson, *The Athenian Agora*. Vol. II. *Coins* (1954), s.v. *Hostilian—Valerian*. Smyrna: Nos. 1224–1244.

<sup>16</sup> Petra Pertusa: Dessau, 509. Concordia: *ibid.*, 9479. Aquileia: *CIL* V. 808. For the situation in general see H. M. D. Parker, *A History of the Roman World from A.D. 138 to 337*, rev. ed. (1958), 156.

legions, which would account for the scantiness of these three types in central and eastern Balkan finds. Probable, too, is that the larger numbers of *RIC* 61 and 63b, in comparison with the number of *RIC* 60, are evidence of an eastward advance by those troops following the retreating enemy in 247.

The evidence at our disposal shows that the concentration of soldiers in northern Italy was not as great as that effected by Gordian III and Timesitheus in Syria for the campaign of 242.<sup>17</sup> But the issues of Mediolanum, as outlined here, were struck in a single officina, whereas the Antiochene issues come from a mint organized in three sections. If Mattingly is right, the mint at Milan working for Decius was also organized in three sections, but this would now appear to be simply an enlargement of this mint beyond its size in the last year of Philip.<sup>18</sup>

If, then, Mediolanum is the place where these coins originated, Philip established the mint there, and not Decius. Philip would also deserve credit for having put to more extensive use Gordian's (Timesitheus') practice of decentralizing production by opening a branch of the central mint to supply the most active theater of war, a practice that gradually became common. Philip did continue to operate the mint at Antioch, even for a while taking the local tetradrachms into the imperial system, but he returned it to its status of before 242 when the eastern frontier ceased to be in danger.<sup>19</sup> Next, however,

<sup>17</sup> Gordian's army collected for the Persian War included either detachments from or the whole body of Legio I Adiutrix (*CIL* III. 196); IV Flavia (*CIL* III. 8154, 195); V Macedonica (K. Pink, "Antioch or Viminacium," *NC* 1935, 98); VII Gemina (*CIL* III. 194); VIII Augusta (*CIL* III. 195); and probably II Parthica, III Parthica, X Gemina, and XIV Gemina, for which s.v. *Legio*, *RE* XII. 2.

<sup>18</sup> The existence and product of the mint of Milan is discussed by H. Mattingly, "The Mint of Milan," *Numismatika* (1934/36), 12–25; and in *RIC* IV. 3, 107–108. But see, too, the doubts of its existence summarized by P. Le Gentilhomme, "La trouvaille de Nanterre," *RN* 1946, 46–47.

The first issue of Decius at Milan seems to have included *RIC* 34, *ADVENTVS AVG*; *RIC* 40, *GENIVS EXERC ILLVRICIANI*; and *RIC* 43, *VICTORIA GERMANICA*. The first coin must be a very early type, as shown by the substance of the legend, and both of the others would go well with it, since they celebrate the victories of Decius over the Goths in the first half of 249. These types, furthermore, are all rare, implying a short issue before the mint began production in earnest about A.D. 250.

<sup>19</sup> See pp. 95–97, 100, below.

he opened a mint at Viminacium, then at Mediolanum. These three locations were all operated by personnel drawn from the imperial mint at Rome. Certainly the style of these coins is essentially Roman. In fact, the dates assigned to the coins of Viminacium and Mediolanum, 246–247, and 247–249, suggest the possibility that the coins were struck by a travelling officina.

The history of these three Milanese coins, as well as of *RIC* 51 and 226, would seem to be as follows. Upon the outbreak of the Carpic War in 245, Philip hurried north to take command in person, and in 246 he opened the branch at Viminacium. There was no need to operate with more than one officina (Antioch had had three under Gordian, six under Philip), since there was no need to coin silver for local needs as was usual at Antioch. The latter city and the province of Syria were a good deal more populous and a great deal more sophisticated economically than Viminacium and Moesia, so that all Philip had to do was to provide for the pay of the army. In A.D. 246, *RIC* 51, VICTORIA AVGG was struck, and continued in 247 along with *RIC* 226, AETERNIT IMPER, with the new Augustus, Philip II, on the obverse. By the end of the year this mint was closed down, since the war had ended. A few reverse dies of *RIC* 51 were left to be found by Pacatianus a year later.

In 247, probably before Viminacium had entirely ceased to operate, a mint was opened at Mediolanum, where it continued to issue currency until the end of Philip's reign, when it was taken over and enlarged by Decius. The obverse legends of the three Milanese coins, IMP PHILIPPVS AVG, show all three to be later than the change of legend, which occurred in A.D. 247. This mint struck in a single officina according to the following schedule.

First came *RIC* 60, FELICITAS IMPP. These coins were executed in more or less normal Roman style, but with a subtle difference in detail. The eye of the portraits is more deeply set, the size of the lower lid exaggerated, and the corner more clearly defined than was usual at Rome. I show an example of this coin in Plate VII, number 3, where it can be compared with a coin of Decius (number 12) struck at Milan. In keeping with most provincial issues of antoniniani, there are no parallel coins of either gold or *aes*.

This type was issued in A.D. 247, and thus was contemporary with

the coins of Roman issue 4. The portraits of *RIC* 60 are certainly younger than either those of the fifth/sixth issue of the central mint, or those of *RIC* 61 and 63 b. Particularly to be noted is the almost complete absence of a beard on the emperor's neck, the lack of fullness of his jowls, and the lack of heaviness about the jaw. These three traits are very much in evidence among the later issues, and incidentally, is further evidence that this coin cannot be assigned to a hypothetical eighth issue.

The average weight of this type at Smyrna was 4.543 grams (seven examples). It was followed by *RIC* 61, the average weight of these being 3.947 grams (seven examples from Smyrna). Evidence will be presented later that at this time the weight of the antoninianus tended to decrease. This type, *FIDES EXERCITVS* (vexillum and standard) was contemporary with the fifth/sixth Roman issue. Issue 4 had included a similar type, but showing four standards on the reverse, instead of the single standard and vexillum of Milan. The portraits are somewhat older than those of *RIC* 60, as comparison of the two coins in Plate VII will show. That this type was struck for about a year is shown by its being about twice as numerous as either *RIC* 60 or 63 b, the latter struck for about the eight months in 249 that Philip was emperor. Again, there is neither gold nor *aes* coinage of this type.

About the beginning of 249, *RIC* 63 b, *FORTVNA REDVX*, appeared at Milan. The portraits seem to be as old as any of Philip's. The type was paralleled by very rare aurei and by a common issue of sestertii and asses. With the victory of Decius over Philip at Verona in September 249, the type ceased.

Concerning the mint at Antioch, I would suggest that production of antoniniani here was reorganized by Philip in 244 on the basis of a mint functioning with six officinae. The issue of this year was as follows:

Philip I	<i>RIC</i> 69, 72	<i>PAX FVNDA CVM PERSIS</i>
	70, 73	<i>SPES FELICITATIS ORBIS</i>
	71, 74	<i>VIRTVS EXERCITVS</i>
Otacilia	127, 128	<i>IVNO CONSERVAT(RIX)</i>
Philip II	213, 214	<i>IOVI CONSERVAT(ORI)</i>



The inclusion of these coins of Otacilia and Philip Junior among the Antiochene issues of the family now seems to me to be assured. The style of the coins is Roman-Antiochene, and the numbers of these types in western hoards is about right for Antioch as point of origin. Dorchester has 158 of them and 6,483 of Rome (main issues only); Nanterre 6 and 603; Couvron 4 and 74; Schwarzenacker 32 and 1,184.<sup>20</sup> Unfortunately, the reports on most of the hoards I have used quote finds in terms of Cohen's second edition, so that the authors do not distinguish between Otacilia's **IVNO CONSERVAT** and **IVNO CONSERVATRIX**. It is therefore impossible to say whether these were struck in approximately equal numbers, and therefore in two officinae. But there is such a balance of numbers among all these six types as to suggest that they were struck in six officinae, Philip having three, Otacilia two, and Philip Junior one.

TABLE 22<sup>21</sup>

<i>RIC</i>	Dor	TOTAL
69, 72	18	33
70, 73	24	41
71, 74	34	54
127, 128	57	127
213, 214	26	68

There is no doubt that Antioch was, at this time, on a six-officinae system for production of at least the local tetradrachms. The section numbers are clearly marked on the coins, which have Greek letter-numerals A through Z on the reverse. I cannot explain why it was felt necessary to change from three to six, unless it was done to increase production. The excavation of nearby Dura-Europos has yielded ninety-two Antiochene tetradrachms struck by Gordian III, but no fewer than 524 of Philip and his family. Fifty of the latter have been assigned by A. R. Bellinger to the six months, or so, that Philip was

<sup>20</sup> Ratios of Roman to Antiochene coins are given in K. Pink, "Antioch or Viminacium," *NC* 1935, 105; and by P. Le Gentilhomme, "La trouvaille de Nanterre," *RN* 1946, 39, 41.

<sup>21</sup> See n. 4 above, for the Dorchester figures.

emperor in 244.<sup>22</sup> This amount would represent almost exactly a six-fold increase over Gordian's production of 238–244, which apparently come from a single officina. It is therefore attractive to think that the mint was expanded six-fold as well. That this number of officinae probably was employed to strike the imperial silver as well is shown by the fact that the local billon at this same time was inscribed *MON VRB*, which is interpreted to stand for *MONETA VRBICA*, that is, imperial money.<sup>23</sup> The imperial silver would, therefore, appear to have come from the same mint, and as such, was probably subject to the same system.

The principal types of antoniniani, then, appear to have been struck by Philip according to the following arrangement:

<i>RIC</i>	<i>Reverse</i>
	Rome: Issue I, A.D. 244.
32 b, 33, 34 b	FIDES MILITVM and variants
35 b, 36 b, 37 b	LAET FVNDATA and variants
40 b, 41, 42	PAX AETERNA and variants
46 b, 47	SALVS AVG and variant
49 b, 50	VICTORIA AVG and variant
52, 53	VIRTVS AVG and variant
	Antioch: Imperial Issue of 244–245 (?).
69, 72	PAX FVNDATA CVM PERSIS
70, 73	SPES FELICITATIS ORBIS
71, 74	VIRTVS EXERCITVS
127, 128	IVNO CONSERVAT(RIX)
213, 214	IOVI CONSERVAT(ORI)

<sup>22</sup> A. R. Bellinger, *The Excavations at Dura-Europos. VI. The Coins* (1949), Nos. 373–567, pp. 20–27. This report supersedes his earlier *Two Roman Hoards from Dura-Europos*, *NNM* 49 and *The Sixth, Seventh, and Tenth Dura Hoards*, *NNM* 69.

<sup>23</sup> H. Mattingly, *Roman Coins*, 2nd ed., (1960), 206; A. R. Bellinger, *The Excavations at Dura-Europos. VI. The Coins* (1949), Nos. 387–391, p. 20. The existence of six officinae is mentioned briefly by K. Pink, "Der Aufbau der römischen Münzprägung in der Kaiserzeit," *NZ* 1935, 29.

98 *Minting of Antoniniani A.D. 238–249*

*RIC*

*Reverse*

Rome: Issue 2, A.D. 245.

26b	ADVENTVS AVGG
31	FELICITAS TEMP
38b	LIBERALITAS AVGG II
48b	SECVRIT ORBIS
123c	PVDICITIA AVG (Otacilia)
119b	CONCORDIA AVGG (Otacilia)
120b, 121, 122b	PIETAS AVG and variants (Otacilia)
215	PIETAS AVGVSTOR (Philip II)
216c	PRINCIPI IVVENT (Philip II)

Rome: Issue 3, A.D. 245–247.

27b	AEQVITAS AVGG
28c, 29	ANNOA AVGG and variant
2b, 3, 4	PM TRP II (III, IV) COS (II) PP
44b, 45	ROMAE AETERNAE and variant
125c, 126	CONCORDIA AVGG and variant (Otacilia)
217, 218d, 219, 220b	PRINCIPI IVVENT and variants (Philip II)

Viminacium: A.D. 246–247.

51	VICTORIA AVGG
226	AETERNIT IMPER (Philip II)

Rome: Issue 4, A.D. 247.

57	AEQVITAS AVGG
59	ANNOA AVGG
62	FIDES EXERCITVS (four standards)
5, 6	PM TRP IIII (V) COS II (III) PP
129	CONCORDIA AVGG (Otacilia)
227, 231c	PAX AETERNA (Philip II) and variant

Mediolanum: Issue 1, A.D. 247.

60	FELICITAS IMPP
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*RIC*

*Reverse*

Rome: Issue 5/6, A.D. 248.

12, 13	SAECVLARES AVGG (lion), I in exergue
15, 16	SAECVLARES AVGG (wolf), II in exergue
224	SAECVLARES AVGG (goat), III in exergue (Philip II)
17	SAECVLARES AVGG (gazelle), III in exergue (Philip I)
116b	SAECVLARES AVGG (hippopotamus), IIII in exergue (Otacilia)
18	SAECVLARES AVGG (antelope), IIII in exergue (Philip I)
19, 20	SAECVLARES AVGG (stag or elk), V or U in exergue
21, 22, 23	SAECVLARES AVGG (antelope or goat), VI or UI in exergue
7	PM TRP V COS III PP, A in field
9	TRANQVILLITAS AVGG, B in field
223	VIRTVS AVGG, Γ in field
115	PIETAS AVGG, Δ in field
10	VIRTVS AVGG, E in field
8	NOBILITAS AVGG, Z in field

Mediolanum: Issue 2, A.D. 248.

61	FIDES EXERCITVS (vexillum and standard)
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Rome: Issue 7, A.D. 248–249.

58	AETERNITAS AVGG
65	ROMAE AETERNAE
24c	SAECVLARES AVGG
25b	SAECVLUM NOVVM
130	PIETAS AVGVSTAE (Otacilia)
230	LIBERALITAS AVGG III (Philip II)

Mediolanum: Issue 3, A.D. 248–249.

63b	FORTVNA REDVX
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7\*

During the years 245 through 249, Antioch continued to strike small numbers of antoniniani (*RIC* 75-87).

Using the above arrangement, it is possible to turn to an investigation of which types were struck in the three officinae of the mint of Rome. Table 23 indicates the distribution of the six types of the first issue. The three pairs which emerge through arranging these six types according to their average weights and style of portraiture are noted in table 24.

TABLE 23

<i>RIC</i>	32b, etc.	35b, etc.	40b, etc.	46b, etc.	49b, etc.	52, etc.	TOTAL
Smy	9	13	10	8	11	8	59
Dor	15	17	16	5	17	15	85
E W	0	2	1	2	1	1	7
C-Y	3	0	2	0	1	1	7
Elv	1	0	3	0	2	1	7
Sul	1	1	0	0	0	1	3
L S	5	2	4	3	5	4	23
Cou	1	2	3	3	2	0	11
Nan	12	10	14	7	11	10	64
Sch	22	27	20	25	19	23	136
N Z	10	8	3	6	4	5	36
Üsk	3	3	4	3	3	2	18
Rus	0	1	0	2	2	3	8
Nic	4	5	3	3	3	8	26
Sme	37	39	30	37	42	26	211
J-K	1	2	0	2	3	1	9
Ple	7	7	6	10	9	5	44
Ath	0	1	0	0	1	0	2
TOTAL	131	140	119	116	136	114	

These pairs continue the peculiarities of style of the three officinae working under Gordian III. The continuity is illustrated in the first two columns of Plate V. Note that this arrangement by officinae not only shows that there was very close similarity between the numbers of coins struck and weights of metal used, but also

TABLE 24

Officina	<i>RIC</i>	Ave. Wt.	No.	Wt. of Coinage
I	49b, etc.	4.387	136	1,196.184 gr.
	35b, etc.	4.289	140	
	TOTAL	4.334	276	
II	52, etc.	4.254	114	1,049.580 gr.
	32b, etc.	4.311	131	
	TOTAL	4.284	245	
III	46b, etc.	4.479	117	1,043.592 gr.
	40b, etc.	4.377	119	
	TOTAL	4.422	236	

that the three officinae each struck one type with two variants and one type with one.

There is very great continuity in style and fabric between this first Roman series of Philip and the last of Gordian. Not only did the fifth issue of the latter (in the Smyrna hoard) average 4.351 grams and the first of Philip 4.322, a difference that is not significant, but also the first portraits of Philip were closely modelled on the last of Gordian.<sup>24</sup> The mint seems, therefore, to have commenced production of coinage for the new emperor very smoothly and without a break in development. I should like to suggest, moreover, that there was a very short period of time when the mint issued antoniniani with portraits of Philip and reverses of Gordian. This would account for a few of the hybrid coins listed in the standard catalogues.

Mattingly and Sutherland think that many of these hybrids are the work of ancient forgers.<sup>25</sup> This is no doubt true, but, at the same time, we should be careful to discriminate even among the hybrids. The *RIC* lists thirteen of Philip I having reverses of Gordian III. It is at least plausible to think that for a short time, immediately after Gordian was killed, the mint would have been hard pressed to maintain production, since without prior notice the new emperor would demand that it very quickly cut completely new sets of dies, not only obverse dies, but reverse dies as well.

<sup>24</sup> *RIC* IV. 3, 56.

<sup>25</sup> *RIC* IV. 3, 4, 14.

The mint no doubt made the new obverse dies first. The emperor's portrait always received more attention than the reverse designs, as is shown by the more careful workmanship and artistry of the obverses, and by the fact, too, that the obverse dies were more frequently renewed than the reverse dies. This last seems obvious since the obverses of coins are usually sharper and more legible than the reverses. Sharpness and legibility depend on the amount of wear a coin receives from handling and also on the condition of the dies in use when the coin was actually struck. Since one can expect wear from handling to be approximately equal on both sides, it follows that the obverse dies were more often renewed in order to maintain a clear "image and superscription" of the emperor, since he himself was, of course, more important than whatever message of policy or propaganda he intended the reverse to convey.<sup>26</sup> Philip would, therefore, have considered it important to inform the empire that he and not Gordian ruled. It is, consequently, *possible* that a short period elapsed during which the mint had new obverse dies of Philip, but no corresponding fresh reverse designs. It might well be, then, that certain reverses of Gordian would for a short time be used. I assume, here, that at the moment when there was a change in regime, the new emperor required at once amounts of currency for reasons of state, the giving of donatives, rewards, and bribes. He could not afford to let the mint stop working.

Now, what grounds can be found for thinking that the hybrids are the work of forgers and not official products? We can begin by eliminating as genuine four of the thirteen, those with the obverse legend IMP PHILIPPVS AVG. This form was not adopted until A.D. 247. This leaves nine, with the early form of legend, IMP C M IVL PHILIPPVS AVG, but with the following reverses of Gordian III:

<i>RIC</i>	Reverse	Issue and Type of Gordian
91	COS II PP (Apollo)	4 — <i>RIC</i> 87-90
92	FELICIT TEMPOR	5 — <i>RIC</i> 141
94	LAETITIA AVG N	4 — <i>RIC</i> 86

<sup>26</sup> H. Mattingly, *Roman Coins*, 2nd ed. (1960), 141-143, discusses the relative importance of obverse and reverse types.

<i>RIC</i>	Reverse	Issue and Type of Gordian
96	PM TRP III COS PP	4 — <i>RIC</i> 87
97	PM TRP V COS II PP	4 — <i>RIC</i> 89
98	PM TRP VI COS PP	4 — <i>RIC</i> 90
99	PAX AVGVSTI	1 — <i>RIC</i> 3
100	PAX AVG	1 — <i>RIC</i> 3
101A	PROVIDENT AVG	5 — <i>RIC</i> 149
102	PROVIDENTIA AVG	5 — <i>RIC</i> 150 (base metal)

Of these, we can at once reject as spurious the four dated types; it would not have been reasonable for Philip to have issued these in his first year of tribunician authority. Next, we may eliminate the two PAX types, which are not actually perfect facsimiles of Gordian's coins. Finally, *RIC* 102, PROVIDENTIA AVG, is known only in base metal, so that it, too, would seem to be counterfeit. This leaves only 92, 94, and 101A as possibly genuine issues of the mint. There is no *prima facie* reason not to accept these coins; they had actually been issued for Gordian by Officinae III, I, and II respectively. It is not merely fortuitous that we can eliminate for very good reasons all but three of the hybrids, and find that each of the three remaining was struck originally by a different section of the mint.

Table 25 shows the distribution of the coins of issue 2. Table 26 indicates the pairs formed through the similarities of average weight and style.

Here, Officina II stops striking coins with portraits of Philip I, and begins to strike for Otacilia, the Augusta, and Philip II. It is likely that III began to issue its coins of this series slightly in advance of I. At any rate, the disparity between I and III of weight of metal struck has now largely been made up. The figures for the three officinae at the end of this issue are: I—2,407.898; II—2,198.560; and III—2,413.112 grams. The average weight of II's coins for this issue is based on only three specimens, and therefore is not accurate. It should probably be somewhat higher. In that case, the disparity between this section and the other two would not be as great as these figures show it. Still, II was beginning to lag slightly, as shown by the absolute number of coins recovered: I—563; II—528; and III—540. Perhaps the necessity of producing two whole new sets of



TABLE 25

<i>RIC</i>	26b	31	38b	48b	123c, etc.	215, 216	TOTAL
Smy	15	14	13	14	0	3	59
Dor	16	15	18	17	17	13	96
E W	0	2	1	0	1	2	6
C-Y	2	2	0	2	0	1	7
Elv	1	1	2	3	3	4	14
Sul	0	2	0	0	1	0	3
L S	5	1	3	6	5	6	26
Cou	2	0	2	4	3	1	12
Nan	8	6	12	8	19	13	66
Sch	25	22	32	26	29	22	156
N Z	5	3	6	4	7	7	32
Üsk	0	3	1	4	1	1	10
Rus	1	1	0	0	0	0	2
Nic	6	8	13	2	5	4	38
Sme	49	42	44	45	44	34	258
J-K	1	0	1	1	12	0	15
Ple	7	12	11	13	15	6	64
Dur	1	0	0	0	0	1	2
Ant	0	0	0	0	0	1	1
Ath	0	2	2	2	1	0	7
TOTAL	143	136	161	151	163	120	

TABLE 26

Officina	<i>RIC</i>	Ave. Wt.	No.	Wt. of Coinage
I	48b	4.251	151	1,211.714 gr.
	31	4.192	136	
	TOTAL	4.222	287	
II	123c, etc.	?	163	1,148.980 gr.
	215, 216	4.060	120	
	TOTAL	4.060	283	
III	38b	4.585	161	1,369.520 gr.
	26b	4.377	143	
	TOTAL	4.505	304	

obverse dies, one for the Augusta, one for the Caesar, interfered with a smooth and constant rate of production.

The large third issue of Philip (table 27) was struck for a period of about two years, beginning some time in 245 and lasting until nearly the end of 247. It was thus almost exactly contemporary with the duration of the Carpic War along the Danube. This issue rivaled in size the fourth or fifth issues of Gordian.

TABLE 27

<i>RIC</i>	2 b, etc.	27 b	28 c, 29	44 b, 45	125 c, etc.	218 d, etc.	TOTAL
Smy	34	49	33	40	2	16	174
Dor	46	53	51	50	47	51	298
E W	3	3	5	4	3	4	22
C-Y	4	2	3	4	6	3	22
Elv	8	8	3	7	2	4	32
Sul	3	2	2	2	0	5	14
L S	14	14	8	18	14	14	82
Cou	4	4	4	8	4	5	29
Nan	37	42	36	37	36	49	237
Sch	117	90	110	95	74	84	570
N Z	35	17	27	16	25	19	139
Üsk	5	2	6	6	2	5	26
Rus	3	3	4	5	5	5	25
Nic	29	23	20	26	19	29	146
Sme	171	170	177	170	124	148	960
J-K	4	4	5	4	1	3	21
Ple	32	41	26	29	41	36	205
Dur	1	0	0	0	0	1	2
Ant	0	0	1	0	0	1	2
Ath	0	1	0	0	0	0	1
TOTAL	550	528	521	521	405	482	

Characteristics of style and fabric show that, as before, the issue came from three officinae. Officina II continued to strike for Philip Junior and Otacilia. The other two worked for Philip, according to the arrangement indicated in table 28.

TABLE 28

Officina	<i>RIC</i>	Ave. Wt.	No.	Wt. of Coinage
<b>I</b>	44 b, 45	4.153	521	4,354.399 gr.
	27 b	4.149	528	
	TOTAL	4.151	1,049	
<b>II</b>	125 c, etc.	4.230	405	3,992.387 gr.
	218 d, etc.	4.028	482	
	TOTAL	4.051	887	
<b>III</b>	2 b, etc.	4.212	550	4,501.413 gr.
	28 c, 29	4.195	521	
	TOTAL	4.203	1,071	

The numbers of coins struck by I and III are about the same; the difference is only twenty-two out of a total of 2,120. Officina I, therefore, was producing at a rate 97.95% that of III. This is almost as close a figure as was determined for the whole reign of Gordian. Officina II, however, is still lagging behind the other two even more than in issue 2. I do not think that this difference of 184 coins can be explained along the lines previously used. I shall, however, reserve explication until issue 4 has been considered.

It is noteworthy that the average weight of this issue for the first time departs from the average of about 4.35 or 4.34 grams which had been maintained at Rome since the first issue of Gordian III. Here, there is an apparent drop to 4.161 grams, a loss of 0.18 grams per coin over the immediately preceding issue.

Actually, the coins of the third issue were struck on two standards. The standard of the second issue was replaced in 246 by a new, lighter standard. This can easily be determined by comparing the weights of the dated types *RIC* 2 b, 3, and 4, which are, respectively, 4.381 (ten examples), 4.198 (seventeen), and 4.003 (seven) grams. The coins of *RIC* 3 should be divided between the coins of 2 b and 4 to make up the two groups. That there were two and only two groups can be seen from the frequency table on p. 122, on which all the coins of Philip I of this issue are plotted. Note that in the case of *RIC* 27 b, there is a cluster of weights around 4.30 grams, and another around 3.90 grams. *RIC* 45 and 44 b show the same thing; one cluster is

around 4.20, a second around 3.90 grams. This, incidentally, shows that *RIC* 45 was struck first. Its average weight is 4.234; 44 b has a mean of 4.122. *RIC* 28c and 29 (struck in that order) seem to have been minted first at about 4.45 grams, then at about 3.85. There is no mathematical or statistical method whereby we can determine with precision what the second standard was.<sup>27</sup> We can merely estimate it by observation of the dated coins. *RIC* 2b, which began at 4.381 grams, was near the old average of 4.345 of the second issue; it ended at 4.003. This is about the mean weight of antoniniani of the fourth issue, which is 4.024 grams, although this figure does not take into account any of the light coins of Officina II. The figure 4.003 does correspond roughly with the observed clusters of weights on the frequency table. Let us say, therefore, that the standard weight decreased from 4.345 to roughly 4.00 or 4.05 grams. While the mean weight of the antoninianus thus fell by 0.35 or 0.30 grams, the fineness seems to have been maintained at more or less the same standard. A similar, though lesser, loss of weight is observable in the aureus.<sup>28</sup>

The cause of this loss of weight is not difficult to assess. By 246, the Carpi had succeeded in entering the Balkan provinces, and in marching about in them for upwards of a year. Since this region was an important source of precious metals, and since the weights of the coins decrease contemporaneously with the barbarian disaster, the reduced standard of the antoninianus must reflect the loss of certain mines or the loss of communication between the mines and the mint, or both.

We can check the effect suggested by comparing the Roman standard with the standard in use in Syria at the same time. The weight of the silver tetradrachms of Antioch held up well throughout this period. Under Gordian it was 3.11 grams; under Philip 3.05.

<sup>27</sup> So the mathematicians of the University of Nebraska say.

<sup>28</sup> Fineness: this remark is based on the reported analyses of coins from the Nanterre hoard. The number is too small to admit of certainty. The government may have resorted to issuing grossly debased coins along with the good ones—say, one out of every ten—but again enough data are lacking to prevent more definite conclusions.

The decline of the aureus is reported in S. Bolin, *State and Currency in the Roman Empire to 300 A.D.* (1958), 255–256.

Probably, the mint there obtained its silver from sources nearer Syria than the Danubian provinces, possibly from Asia Minor.<sup>29</sup>

This question of average weight, mines and Carpi is best dealt with after an examination of issue 4. The coins of issue 4 are distributed among the hoards as indicated in table 29. The distribution among the officinae is noted in table 30.

TABLE 29

<i>RIC</i>	5, 6	57	59	62	129	227, etc.	TOTAL
Smy	8	4	6	12	0	0	30
Dor	7	8	9	11	8	12	55
E W	2	0	0	0	0	0	2
C-Y	0	0	0	0	0	1	1
Elv	0	1	2	0	1	0	4
L S	2	3	6	1	3	1	16
Cou	1	0	0	1	3	0	5
Nan	5	6	9	10	5	9	44
Sch	7	18	15	14	13	15	82
N Z	4	1	4	6	1	7	23
Nic	3	1	1	0	1	2	8
Sme	20	21	25	17	13	29	125
J-K	2	0	0	0	0	0	2
Ple	5	7	5	2	5	5	29
Ath	0	0	0	2	0	0	2
TOTAL	66	70	82	76	53	82	

The lack of any coins of type *RIC* 129, 227, or 231c in the Smyrna hoard prevents me from saying what their average weight was; if it conformed to the usual 0.10 gram less than that of Officina I, it would have been about 3.85 grams, which for 135 coins would amount to 519.75 grams.

The average weight of this issue, even without the light coins of Officina II included, is 4.024 grams; with II's coins included it

<sup>29</sup> The weight standards of the tetradrachms are from L. C. West, *Gold and Silver Coin Standards in the Roman Empire*, *NNM* 94, 22-23, based on seventy-six of Gordian and two hundred sixty-four of Philip. For Asia Minor as a source of silver, see T. R. S. Broughton in *ESAR* IV (1938), 620-621.

TABLE 30

Officina	RIC	Ave. Wt.	No.	Wt. of Coinage
<b>I</b>	57	4.200	70	
	59	3.793	82	
	TOTAL	3.956	152	601.312 gr.
<b>II</b>	129	?	53	
	227, etc.	?	82	
	TOTAL	?	135	?
<b>III</b>	5, 6	4.073	66	
	62	4.050	76	
	TOTAL	4.059	142	576.378 gr.

would have been less than 4.00 grams, perhaps about 3.95 grams. This is the average weight of Officina I, and it is normal for I to approximate the average weight of any particular issue. This means that there was a further decline of about 0.05 grams per coin from the standard of the preceding issue.

All of this—the continuing decline in weight, II's continuing low production in comparison with I and III, as well as the fact that the very next issue appeared with officina numbers I through VI—requires explanation. No doubt, all of these facts, so intimately concerned with the currency itself, are related to one another.

Let us begin with the weight standard. The second decline in these two issues may be accounted for by one of two alternatives. Philip himself may have decreed the decreases in weight for some reason or another; or, the mint officials may have done it themselves illegally.

Since the evidence that can be used to check these hypotheses is exceedingly scanty, the only recourse is to examine the two possibilities with the intention of eliminating the one that appears unlikely. The remaining possibility, then, must suffice for the present.

Philip might have further lowered the standard because he needed more coinage and had to turn a more or less constant amount of bullion into a greater number of coins than was usual. If so, he did so for one of three, and only three, reasons. First, he might have embarked upon a very large and more extensive than usual program

of public works. In fact, we can be reasonably certain that he did not. Such a policy would be very extravagant at a time when the state was being assailed by so many enemies. Furthermore, the only project attributed to him by the sources is the construction of a reservoir in the capital to relieve a shortage of water. Aside from this, we hear only of the usual repair of roads, and that is all.<sup>30</sup> This is certainly not extensive.

Second, Philip may have granted numerous *liberalitates* to the people. The coins themselves are evidence that he did not. He gave three, whereas Gordian had given four. True, Philip had to bear the cost of the great Secular Games of 248, but for this, we happen to know, part of the cost was saved by the use of animals collected by Gordian to celebrate his victory over the Persians.<sup>31</sup> All this smacks of careful economy.

Third, Philip may have increased the size of the army or simply increased its pay. In fact, there is no evidence that he added to the establishment of either the legions or the *auxilia*, or that he did increase their pay. Indeed, there seems to have been no immediate reason that he should. Certainly he had had to face a difficult military problem in the invasion of the Goths, but this attack does not seem to have been more acute than the military dangers of Gordian's reign, during which there was a very serious invasion and even short occupation of parts of Syria by the Persians. This was accompanied by troubles along the same Danube front.<sup>32</sup> If anything, the invasion of the Carpi alone was less of a threat. At any rate, Gordian had been able to maintain the situation without resorting to a lower standard for the currency. There seems to be no reason to suppose that Philip had to lower the standard for this reason.

Actually, Philip did not increase the output of silver currency over the level used by Gordian. We may compare his production

<sup>30</sup> The reservoir: Aur. Vic. *Caes.* XXVIII. 1. Roads: list in E. Stein, "Julius (Philippus)," *RE* X (2e Reihe), 766. On Philip's building in general see W. Ensslin in *CAH* XII (1939), 91.

<sup>31</sup> *Liberalitates* - Gordian: *RIC* IV. 3, No. 137; Philip: *RIC* IV. 3, No. 230. Secular games - *SHA*, 3 *Gord.*, XXXIII. 1-2.

<sup>32</sup> *SHA*, 3 *Gord.*, XXXI. 1. See, too, D. Magie's note on this passage in the Loeb edition; P. Townsend, "The Administration of Gordian III," *YCIS* IV (1934), 122-123.

with that of Gordian. Neither emperor seems to have had a surplus of metal to work with. In view of the heavy-handed and rapacious attitude of Maximinus toward the property of private citizens—which provoked the hostility of men not only of the class of notables, like Herodian, but also of more humble origin, like the Christians whose feelings have come down to us through the tradition in Eusebius—it is extremely unlikely that Gordian began his reign with anything like a surplus of uncoined bullion.<sup>33</sup> The joint reign of Balbinus and Pupienus was much too short to have created one. We may, therefore, treat Gordian's issues—particularly the fourth and fifth—as reflecting, more or less, the coining of the total income of silver. Those two issues were struck over a period of about forty-two months, from around January, 241, until about July, 244. The output is represented by 5,734 coins (main Roman issues only) in the Dorchester hoard. In a similar forty-two month period of Philip, from about July, 244 until the end of 247, there are 5,491 antoniniani in Dorchester.<sup>34</sup> It is evident that the drop in weight did not come from an expansion in the number of coins minted.

Philip, again, might have lowered the standard a second time himself because of a shortage of metal. This had led to the first lowering of weight, as noted, on account of the loss of mines in the Balkans. Possibly as early as A.D. 244, certainly in the following year, Carpi crossed the Danube in large numbers and ravaged Thrace, Macedonia, and Lower Moesia and Dacia. In 245 Philip left the capital and proceeded to the troubled provinces personally to direct operations. Fighting continued throughout 246, and only in 247 did the emperor succeed in defeating the Goths and in expelling them from the empire. Upon his return to Rome, a short but triumphant irregular issue of antoniniani proclaimed a *VICTORIA CARPICA*.<sup>35</sup>

This invasion must have diminished the supply of gold and silver

<sup>33</sup> For Maximinus' volume of coinage see Hdn. VII. 3. 5, and R. A. G. Carson, "The Coinage and Chronology of A.D. 238," *ANSCent. Publ.* (1958), 193. Herodian's judgment on Maximinus is VII. 3. 1. Christians: Eus. *H.E.* VI. 28, and see, on this point, W. Ensslin in *CAH* XII (1939), 75–76.

<sup>34</sup> Includes *RIC* 51, 60, 61, 63b, and 226.

<sup>35</sup> Authorities for this war include E. Stein, "Julius (Philippus)," *RE* X (2d Reihe), 761–762; W. Ensslin in *CAH* XII (1939), 90–91; A. Alföldi, *ibid.*, 140–142; and H. M. D. Parker, *A History of the Roman World from A.D. 138 to 337*, rev. ed. (1958), 153. The coins are *RIC* 66.



available to the mint, since the Balkan region, which was so sharply affected by the Carpi, was one of only a few places where precious metals were extracted. Sardinia had small workings, but they were not extensive. Spain's once rich deposits had dwindled seriously by the third century. Gaul contributed some silver, as did Britain, but the latter was especially far-distant from Rome. Compared with these provinces, the mines of Greece, Macedonia, and Italy itself were unimportant.<sup>36</sup>

The Balkan provinces of Moesia, Dacia, Pannonia and Dalmatia, on the other hand, were of great significance. We know of much activity here, even for the troubled third century, through actual excavation of the ancient mines, and from the study of inscriptions found near them. Evidence of intensive silver mining has been unearthed in Moesia. The important gold mines of Dacia we know to have been under the supervision of a freedman procurator located at Zalatzna. The procurator supervising the works of Dalmatia and Pannonia, however, was of equestrian rank, and had his headquarters at Domavia, near the modern Gravina.<sup>37</sup> In view of these facts, therefore, it is extremely likely that the weight of the Roman gold and silver coins fell in 246 (affecting the coins of the third issue) because a substantial number of the productive Balkan mines were in a region of great disturbance, and the loss of metal from this region could not be entirely compensated through use of metals produced elsewhere.

<sup>36</sup> Sardinia: O. Davies, *Roman Mines in Europe* (1935), 71. Spain: T. Frank in *ESAR* I (1933), 146; V (1940), 292; J. J. van Nostrand in *ESAR* III (1937), 122, 128, 151, 158. O. Davies, op. cit., cites the ancient evidence and adds important archaeological evidence, 94-95, 98, 108 and n. 7, 109-111 and n. 12, 112 and n. 9, 130-131, 136-137, 147. An article on the subject is that by T. A. Rickard, "The Mining of the Romans in Spain," *JRS* XVIII (1928), 129-143. The remarks of M. I. Rostovtzeff, *SEHRE*, 2nd ed. (1957), I. 343, 413-414; II. 691, no. 102 are important.

Gaul: O. Davies, op. cit., 76-78, 80-82, 85-86. Britain: *ibid.*, 140, 148-149, 161; R. G. Collingwood in *ESAR* III (1937), 34, 64, 111; T. Frank, *ibid.*, V (1940), 197, 291.

Greece: O. Davies, op. cit., 251. Macedonia and Italy: T. Frank in *ESAR* I (1933), 262-264; J. A. O. Larsen in *ESAR* IV (1938), 297, 313.

<sup>37</sup> The ancient evidence, both archaeological and epigraphic, is given and discussed in O. Davies, op. cit., 182, 193-194 and n. 1, 201, 205-206, 216-217, 222, 224, 228. See, too, M. I. Rostovtzeff, *SEHRE*, 2nd ed. (1957), II. 643, n. 83.

I must emphasize that the argument pertains, so far, only to the third issue, whose average weight fell from about 4.35 to about 4.00 or 4.05 grams. The average weight of the fourth issue, however, is a stumbling block, because its average weight is even lower, amounting to only about 3.95 grams. This scarcely can be accounted for by the above argument, since during 247 the Roman armies were repelling the Gothic forces, and certainly by the end of the year, but more probably sooner, the enemy had been completely driven out.<sup>38</sup> Therefore, what silver lands were lost must have been by then entirely recovered, and their communications with Rome safeguarded. It would probably be safe to assume that this was already done by the end of the campaigning season of 247, that is, by the end of summer. The coinage of issue 4, struck in the last months of 247, should reflect this. One would expect it to return to the standard of 245, or at least to return part way. In fact it declines again. Therefore, in terms of our present knowledge, there seems to be no reason of state by which we can account for the continuing decline of weight.

This brings us to the second principal alternative, that is, unofficial activity on the part of the mint officials. Suppose that we consider the average weight of the fourth issue in conjunction with that of the immediately following fifth/sixth issue of the spring of 248. The average weight of 4.152 grams is a rise of about 0.15 grams over the second standard of the third issue.<sup>39</sup> Also, these coins of issue 5/6 were, for the first time, marked with officina numbers and the number of sections rose to six. This can only mean that the old sections were broken up. Furthermore, the new ones had, for the first time, to sign their product publicly. In itself, this fresh departure hints strongly at some kind of disciplinary or punitive action. All things considered, I feel that the weight of evidence inclines to the hypothesis that the mint officials—probably not only the *triumviri*

<sup>38</sup> Philip's title, "Germanicus Maximus," assumed in A.D. 246 (A. Alföldi, *CAH* XII [1939], 142) clearly implies a great initial success against the invaders, and this strengthens the case that in 246 the Romans were successfully ending the barbarian threat.

<sup>39</sup> Based on forty-five coins from Smyrna. The average compares well with data from elsewhere. Thirty-five of the six animal types, *RIC* 12, 15, 224, 116b, 19, and 21, inscribed *SAECVLARES AVGG*, from Nanterre, average 4.18 grams: P. Le Gentilhomme, "La trouvaille de Nanterre," *RN* 1946, 46.

*monetales*, but also the *procurator monetae*, were involved. It is hard to imagine that the section heads could themselves lower the standard, for whatever reason, without the head of the mint being privy to it. Perhaps, of course, he was not. It is certain that from about this time the title *triumvir monetalis* ceases to appear in our epigraphic record, suggesting strongly that the office was abolished, no doubt for some important reason.

I would even go a bit further, and suggest that the leadership of this bit of dishonesty was provided by the triumvir of Officina II. This hypothesis would explain why, beginning already at the time of the third issue, the output of II was smaller than that of the other two sections. The figures for this issue show that II struck some 887 antoniniani, while the other two were coining 1,071 and 1,049. In issue 4, II continued behind again, but with a much smaller difference. One would expect *a priori* that the officina with the least number of coins would have the heaviest average weight. But the reverse is true: II's coins are always lightest. The fineness of this section's coins was also lowest, being about 37.5%, as compared to the 40–40.5% of the other two. These figures are based on the small number of identified and analyzed coins in the Nanterre hoard, there being ten of Officina I, nine of II, and nine of III. The accumulated totals of production for the first three issues show, moreover, that Officinae I and III struck almost identical numbers of coins. The figures are I—1,612; III—1,611; and II—1,415 coins. The weight of metal struck, on the other hand, was I—6,762.297; III—6,914.525; and II—6,190.947 grams. Whereas I is 97.80% of III, II is only 89.54%. Possibly the head of Officina III was also involved in the conspiracy, while the triumvir in charge of I was not. The evidence for this is by no means compelling, resting on a single analyzed antoninianus of the third issue from the Nanterre hoard. It is base, containing only a trace of silver. If we take the weights of coinage and multiply by the percentage of fineness, we find that II struck 2,329.653 grams of silver and III 2,481.763, while I minted 2,712.357, a significant amount more than the other two.<sup>40</sup>

<sup>40</sup> Fineness: the figures for the officinae are worked out from the figures published for the Nanterre hoard. They are I—40.11%; II—37.63%; and III—41.44%. The average of all three is 39.81%. L. C. West, *Gold and Silver*

This cheating in the mint would coincide, after all, with the absence of Philip from Rome during the Carpic War. Possibly the triumvirs represented senatorial resentment with Philip's conduct of the government in his later years. If it is correct that the triumvirs were in charge of the officinae, we may be reasonably certain that they were men of the senatorial class and faction. The inscriptions show this, and the title itself suggests the old senatorial republic. Philip's relationship with the Senate did worsen during his reign. The address *Eis Basilea* should certainly be interpreted as containing the protests of the order against his imperial policy, and in no wise as a simple encomium. Philip even offered to abdicate before the Senate in A.D. 248, and only Decius rose among the Fathers to reject the suggestion.<sup>41</sup> Many kept silent, no doubt out of anger with the emperor and resentment with Decius. The Senate of 248, after all, still must have counted many members who had but lately helped, and in no indecisive way, to rid the state of the barbarous Maximinus, and had allied itself with the two elder Gordians. It is not difficult to suppose, therefore, that some of its members hoped to rid the state of the upstart, "Arab" murderer of Gordian the Third. This hypothesis is at least attractive, for it leads to the interpretation that the cheating by the heads of officinae was perhaps part of a plot against the emperor which included some or one of the provincial rebels of A.D. 248. Is this why the aurei of Sponsianus had a republican reverse?<sup>42</sup>

Dishonesty and disloyalty towards Philip in the mint should occasion no surprise in view of what we know of disloyalty and dishonesty in other branches of his administration. The rebellions of Pacatianus, Sponsianus, Iotapianus, and Decius are well known. In 245 or 246 the emperor had to check the heavy-handedness of his offi-

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*Coin Standards in the Roman Empire*, NNM 94 reports fourteen antoniniani at 43.7%. He does not identify them by type.

If we reject the plated coin as a chance find, the weight of silver struck by Officina III would rise to 2,865.379 grams, which would make its output comparable with that of Officina I. We need more evidence.

<sup>41</sup> *Eis Basilea*: See the remarks of M. I. Rostovtzeff, *SEHRE*, 2nd ed. (1957), I. 451-459. The scene in the Senate is described by John. Ant., frag. 148 = *FHG* IV. 598. See, too, W. Ensslin in *CAH* XII (1939), 93.

<sup>42</sup> Sponsianus: *RIC* IV. 3, No. 1, p. 67; p. 106, n. 1.

cials towards private citizens. One case of this was oppression by soldiers and officials practised against people in the Phrygian village of Aragüe. Then, indeed, we hear of injustice in the *fiscus* itself, which brings us very close to the mint.<sup>43</sup>

The literary evidence for the reign of Philip is sparse at best; for the mint itself under this emperor, it is totally lacking. But shocking dishonesty is known to have occurred at other times. Constantine the Great had to forbid imperial minters from issuing counterfeit money, and his son Constantius had to threaten the death penalty to prevent *flatuarii* from tampering with the metal used for coining.<sup>44</sup> Nor should we doubt that the personnel of the mint were incapable of taking drastic measures for their own ends when they chose. There is one example of actual rebellion known, that of Felicissimus during the dominate of the strong emperor Aurelian (270–275).<sup>45</sup> These examples from later times prove nothing more, of course, than what happened in the reigns of Aurelian, Constantine, and Constantius. But they do suggest possibilities, and in view of the general situation the unfortunate Philip faced in the last two years of his reign—dishonesty in the administration and disloyalty in the provinces—the parallels of other times make malfeasance in his mint plausible.

Whether these lamentable conditions inside the mint had anything to do with the unequal distribution of coinage in the empire we can-

<sup>43</sup> Heavy-handedness: *Cod.*, IX. 51. 7; Aragüe: *OGIS* 519, and the reading of this inscription of M. I. Rostovtzeff, *SEHRE*, 2nd ed. (1957), II. 741, n. 26. *Fiscus*: *Cod.*, IX. 49. 5, and the remark of W. Ensslin in *CAH* XII (1939), 89.

<sup>44</sup> Constantine: *Cod. Theo.* IX. 21. 1 (A.D. 321); Constantius: *ibid.*, IX. 21. 6 (A.D. 349).

If one is permitted to be perverse towards the propaganda of the coinage, one might interpret the message of the silver medallions of 246 or 247 as a clue to dishonesty in the mint. These medallions are *RIC* 54, 55, and 228. Each officina seems to have struck one of them. They must have been issued in 246 or 247 because Philip Junior has the title "Augustus." The medallions show the three *Monetae* holding scales, and have the unfortunate legends *AEQVITAS PVBLICAE*, *AEQVITAS AVGG*, and *AEQVITAS MONETAE*. Certainly by then, the coinage was no longer being struck on the old standard and the untruth of the legends might be put alongside the *AETERNITAS AVGG* of Philip's last issue as more an effort to incite hope than as an attempt honestly to describe.

<sup>45</sup> *SHA Aur.* XXXVIII. 2; *Aur. Vic. Caes.* XXXV. 6; *Eutrop.* IX. 14.

not know. It is certainly possible. Perhaps the simple slowing down of production in Officina II meant that some parts of the empire did not receive the normal amount of money. At Smyrna there was an extreme shortage of the coins of this officina.<sup>46</sup>

Philip's return to the capital brought discovery of the discrepancies, and the fifth/sixth issue was produced by a reorganized mint. The new coins commemorated the millennial anniversary of the founding of the *Caput Orbis*. Two sets of six antoniniani each were issued, the one with the officinae numbered in Latin I through VI, the other in Greek A through Z. The two sets were probably struck contemporaneously.<sup>47</sup> With the help of the numerals, there is no difficulty in assigning the twelve types to their respective officinae.

TABLE 31<sup>48</sup>

Officina	<i>RIC</i>	Ave. Wt.	No.	Wt. of Coinage
I	7, 12	4.140	117	414.380 gr.
II	9, 15	4.204	99	416.196 gr.
III	223, 224	3.995	80	319.600 gr.
IV	115, 116b	?	107	?
V	10, 19	4.161	108	449.388 gr.
VI	8, 21	4.171	97	404.587 gr.

Here we see the results of the reorganization. The four officinae which struck for Philip I (I, II, V, and VI) show a remarkable similarity in average weight, the difference between highest and lowest being only 0.064 grams. This is in marked contrast with the older, more careless habits of the mint, which had tolerated a difference as great as 0.20 grams between officinae during the previous ten years. Still, there was not perfect uniformity of production, as the numbers of coins found shows. Officina III, with eighty coins, is far behind I with 117. This can be explained in several ways.

<sup>46</sup> Officinae I and III: 419; Officina II: 38.

<sup>47</sup> *RIC* IV. 3, 62.

<sup>48</sup> In this table, the average weight of the coins of Officina III, and therefore the total weight of coinage struck, is determined only from the six examples in the Smyrna hoard. There are none of Officina IV.

Temporarily, at least, such an important reorganization must have somewhat disorganized the mint. Such inevitably happens when the personnel of a large organization are rearranged on a grand scale. We have seen a similar phenomenon, although on a smaller scale, in the reign of Gordian. Second, Officina III seems to have issued aurei in larger numbers than either I or IV. These were the only three sections to strike gold at this time. Third, and most important, III, striking for Philip II, was descended from old Officina II, the leader in dishonesty. Whatever retribution Philip wreaked on the personnel of this section, it would have been very hard hit, and would have had difficulty in keeping up with the others.

The relationship of the six new to the three old officinae can be determined on grounds of style and fabric. These criteria show that I and II were descended from old I; III and IV from old II; and V and VI from old III. The close resemblances of the obverse portraits produced in the old and new sections are illustrated in columns two and three of Plate VI. There is an obvious continuity between *RIC* 5 and 62 and *RIC* 19 and 21. Note, too, that the latter pair have average weights of 4.161 and 4.171 grams, only 0.010 grams apart. These strong similarities of portraiture and manufacture show that a division of the old officinae was made, and that each was split two for one. Since one officina became Officinae V and VI, with the highest numbers in the series, I have assumed that the old one similarly had the highest number in the old series, and that is why I designated the one officina working between 238 and 248 Officina III. In the same way, I suppose that new I and II had earlier been numbered as I. Such a method of naming the old officinae and of making them into the new ones might reasonably have been expected, since it was the simplest procedure to follow. It was generally similar to, moreover, methods otherwise used in Roman administrative practise, as for example, forming one legion out of the parts of two others, and not making two new ones, or as in Diocletian's creating new, small provinces out of old large ones when he reorganized the empire. Like Diocletian, Philip made disloyalty more difficult by making the parts of the mint smaller and less important in themselves, which would have, therefore, also the effect of minimizing the effect of any future dishonesty. In going from a three-

to a six-officinae organization, of course, he may have been inspired by the changes made earlier in his reign at Antioch, which went to a six-officinae system in A.D. 244.

The rate of production of this fifth/sixth issue does not show any increase. Nor does the subsequent seventh. This, coupled with the increase in number of officinae shows once again that the number of sections was by no means entirely related to the mass of coinage actually struck, but was, in large part, an important means of administrative control alone. To be sure, the number of sections did bear some relationship to the amount of currency struck. This is clear from the reign of Gallienus, when the number of officinae rose as high as twelve, and the mint worked at high pitch to flood the empire with enormous amounts of debased and all but worthless coin.<sup>49</sup>

The seventh and last issue of Philip appeared at about the end of spring or beginning of summer in 248. It continued to be struck until the end of his reign in September, 249. It was produced by six officinae (see table 32), and this organization was inherited by Decius.<sup>50</sup>

I do not repose much confidence in these average weights, since the number of coins used to establish them is small, being only eight, seven, one, and seven for Officinae II, III, IV, and VI. The numbers of coins produced, however, now show a respectable uniformity, Officina III having caught up with the rest. The evidence for the assignment of these six types to the six sections rests largely on style, and I have not relied on the criterion of weight because of the small sample. The continuity is illustrated by comparison of

<sup>49</sup> The number of officinae from P. H. Webb, *RIC* V. 1, 21. The volume of Gallienus' coinage can be judged from both finds and excavation coins. At Verulam, for example, a report of 1932 mentions six of Gordian III, Philip, Gallus, and Valerian I together, but seventy-one of Gallienus (H. Mattingly, "St. Albans. Site Finds," *NC* 1932, 239-242). The Poole hoard gives even more striking figures: Gordian III to Valerian I, fifteen coins; Gallienus, two hundred fifteen (H. Mattingly, "Poole Hoard of Roman Coins," *NC* 1933, 229-232). From Athens we have altogether twenty-eight of Gordian, twenty-six of Philip and his family, eleven of Decius, fifteen of Gallus, four of Aemilian, thirty-eight of Valerian, and three hundred forty-nine of Gallienus (M. Thompson, *The Athenian Agora*. Vol. II. *Coins* [1954]).

On the mint of this period see the remarks of F. Oertel in *CAH* XII (1939), 266.

<sup>50</sup> The organization of the mint in Decius' time in H. Mattingly and F. S. Salisbury, "A Find of Roman Coins from Plevna in Bulgaria," *NC* 1924, 210-238; and *RIC* IV. 3, 109-113.



TABLE 32

Officina	<i>RIC</i>	Ave. Wt.	No.	Wt. of Coinage
I	58	4.059	80	324.720 gr.
II	25 b	3.996	86	341.076 gr.
III	230	4.128	89	367.392 gr.
IV	130	3.720	93	345.960 gr.
V	24 c <sup>51</sup>	4.275	99	423.225 gr.
VI	65	4.181	86	359.566 gr.

columns one and two of Plate VII. The similarity between the coins of Otacilia and Philip II of issues 5/6 and 7 are patent and obvious: the officinae continue to produce portraits of these two rulers designed along the same lines as before. More subtle is the continuity between the coins with portraits of Philip I. But *RIC* 12 and 7 are continued in *RIC* 58, which has a hooked, sharp nose and rounded back of the head, an aggressive chin, and narrow, firm lips. *RIC* 19 and 10 are succeeded by *RIC* 65, as seen from the big, long, pointed nose, the straight back of the head, and short heavy mouth. *RIC* 24c followed 21 and 8, all three having an overhanging nose, a heavy neck diminishing in size as it enters the shoulders, a firm, straight mouth, and a slightly recessive chin. The portrait style of *RIC* 15 and 19 appeared on *RIC* 25 b, with strong, jutting chin, powerful neck, a tall head, and large, even lettering.

It is difficult to suggest why the officinae numbers now disappear. Perhaps, it was felt that the reorganization having been completed and made known to both government and people, there was no longer any need to have the numbers appear on the coins.

The average weight of all the coins of this issue indicates a new drop in standard. Issue 7 averages 4.021 grams. This, in all likelihood, was caused by the outbreak of a series of fresh disasters in the same region as those of 245 and 247. The mean weight certainly fell to about the same level it had been in the earlier period. We do not have sufficient information to pronounce upon the fineness of the coins each of the new officinae minted, or even upon the average

<sup>51</sup> Surely, what Mattingly (in *RIC*) calls a low column, and K. Pink (in "Der Aufbau der römischen Münzprägung in der Kaiserzeit," *NZ* 1935, 31) a "cippus" on this coin is really an altar of the familiar type.

degree of purity of the fifth/sixth and seventh issues. Taking both issues together, however, thirteen coins from Nanterre have an average silver content of 38.15%. This statistic is probably significant, and shows that when the mint was reorganized, new standards were adopted for the currency, and the old standards inherited from Gordian and used in the first years of the regime were dropped. The new mean weight was about 0.20 grams less, and the fineness about 2.0% lower. The standard of purity may have been intended only as a temporary expedient in force in A.D. 248, as the succeeding coinage of Decius seems to have been finer.

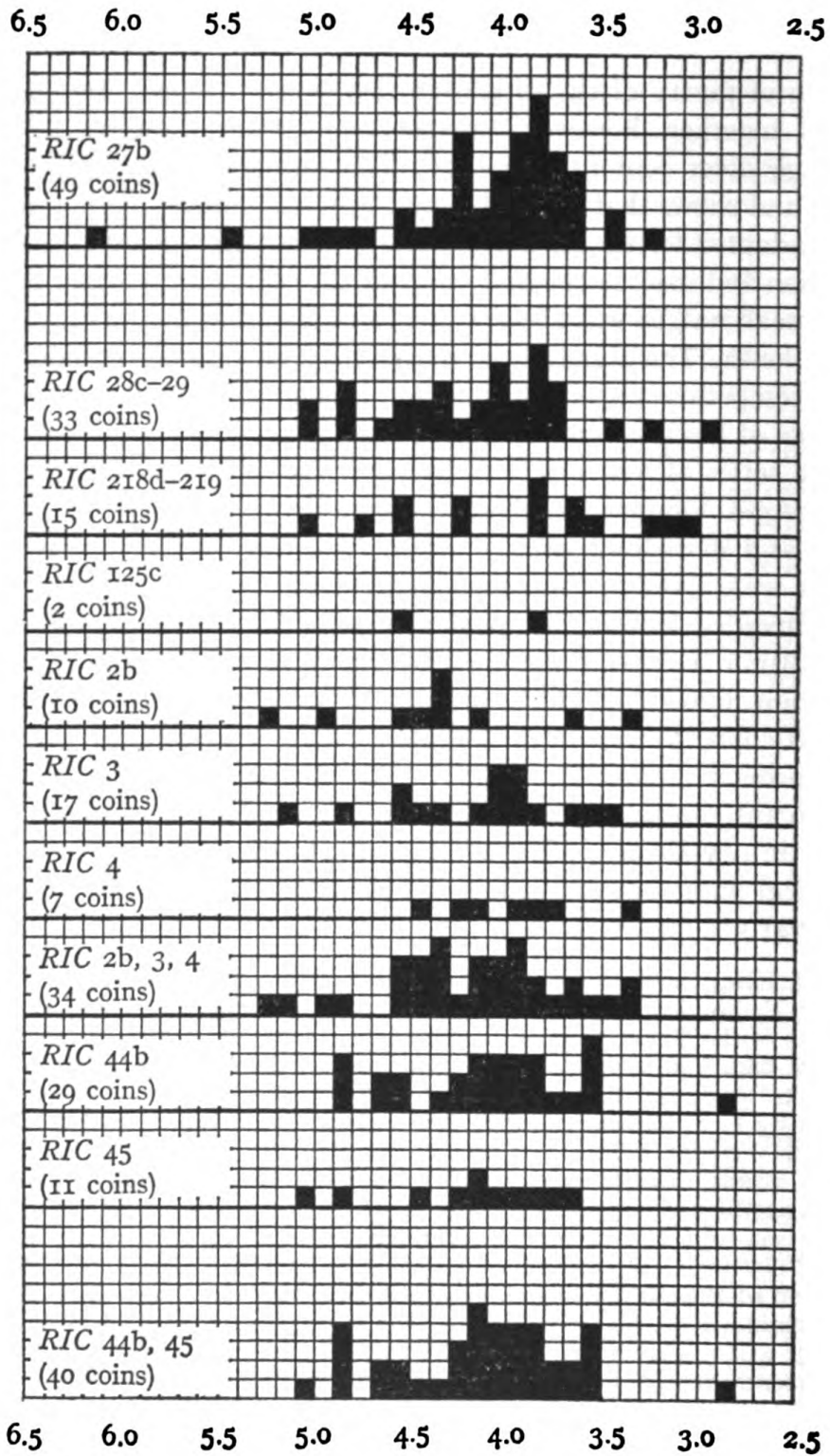
The series of new disasters included the rebellion of Pacatianus, who seized Viminacium about the middle of 248. Here he began a small and short-lived issue of silver. As if this were not enough, the Goths went over to the attack, and led by Gunthericus and Argathus invaded Moesia. Iotapianus revolted in the east, probably in Asia Minor. Decius, dispatched by Philip to retrieve the Danubian situation, himself rebelled, and ultimately met and defeated Philip in battle near Verona in the fall of 249.<sup>52</sup> To him belonged, therefore, the burdens of empire.

The antoniniani of Decius followed those of Philip without much break in development. The average weight over his whole reign was identical with that of Philip's last issue, 4.02 grams. His silver was about 41.5% fine.<sup>53</sup>

<sup>52</sup> Authorities for these events include Mattingly and Sutherland, *RIC* IV. 3, 65–67; E. Stein, "Julius (Philippus)," *RE* X. 762–763, who outlines the invasions of the Goths, as does W. Ensslin in *CAH* XII (1939), 92–93 and A. Alföldi, *ibid.*, 140, 143; G. Seure, "Trésors des monnaies antiques en Bulgarie. II. Le trésor de Nicolaévo," *RN* 1923, 129 and n. 2. The role of Decius is discussed by F. S. Salisbury and H. Mattingly, "The Reign of Trajan Decius," *JHS* XIV (1924), 1–23.

<sup>53</sup> The average weight is made without consideration of the "Divi" issue struck at Milan late in the reign. The number of coins used in determining it is 2,475: 594 from Dorchester (H. Mattingly, "The Great Dorchester Hoard of 1936," *NC* 1939, 40); 1,364 from Plevna (H. Mattingly and F. S. Salisbury, "A Find of Roman Coins from Plevna in Bulgaria," *NC* 1924, 237–238); 160 from Nanterre (P. Le Gentilhomme, "La trouvaille de Nanterre," *RN* 1946, 49–50); and 357 from the Villa Patrizi hoard (A. Segre, *Metrologia e circolazione monetaria degli antichi* [1928], 367–368, n. 7).

The fineness is established from twenty-eight examples, fifteen from Nanterre (P. Le Gentilhomme, *op. cit.*, 54–55), and thirteen reported by L. C. West, *Gold and Silver Coin Standards in the Roman Empire*, *NNM* 94, 25.



## THE HOARDER AND SMYRNA

The beautiful and wealthy seaport of Smyrna in the province of Asia was an important city in the third century.<sup>1</sup> It was not only significant commercially, it also enjoyed the prestige of being a center for the worship of Dea Roma and Divus Augustus. The town had been hard hit by the plague in the principate of Marcus Aurelius and suffered an earthquake in 178, but it survived them as well as could be expected and entered the third century in still prosperous condition.

In A.D. 238, the province of Asia declared against the tyrant Maximinus when the first two Gordians rebelled against him.<sup>2</sup> No doubt, the confiscations that Maximinus had exacted in Asia, as elsewhere, made certain people yearn for his violent end.<sup>3</sup> Such men must, therefore, have been overjoyed to learn that the oppressor had been killed in the spring of the year.

The career of Maximinus was of great importance for the social history of the times. Some of the notables of the cities must have been impoverished through his numerous and heavy confiscations. The money was taken, and was spent, and passed in many cases into new hands. An important redistribution of wealth therefore occurred. Perhaps, the owner of the Smyrna hoard was one person who was able in some way to gain from this. At any rate, the hoard began to be amassed about the time that Gordian III became emperor, in the summer of 238.<sup>4</sup> The hoard certainly bears every

<sup>1</sup> Two excellent general authorities used for this chapter are C. J. Cadoux, *Ancient Smyrna. A History from the Earliest Times to 324 A.D.* (1938); and D. Magie, *Roman Rule in Asia Minor* (1950).

<sup>2</sup> P. W. Townsend, "The Revolution of A.D. 238," *YCIS* XIV (1955), 67 and nn. 52-53; but see W. Ensslin in *CAH* XII (1939), 79.

<sup>3</sup> *Hdn.* VII. 3. 5; *SHA 2 Max.* VIII. 2; XIII. 5 represent the tradition of hatred.

<sup>4</sup> The chronology of the reign of Gordian is discussed by P. W. Townsend, "The Chronology of the Year 238 A.D.," *YCIS* I (1928), 231-238; "A Yale Papyrus and a Reconsideration of the Chronology of the Year 238 A.D.," *AJPh* LI (1931), 62-66; and, now, by R. A. G. Carson, "The Coinage and Chronology of A.D. 238," *ANSCent. Publ.* (1958), 181-199.

appearance of having been gradually accumulated from coins taken at random from ordinary circulation. This is evident from the diverse conditions of the money, some pieces being virtually uncirculated, rather more somewhat worn, a few badly, and so on, as well as from the lack of a number of coins struck from identical dies, which might have indicated spasmodic but relatively larger deposits in the hoard. That accumulation began about 238 would appear from the fact that there are only twenty-five antoniniani from the period 215–222, and four of Balbinus and Pupienus together. Moreover, the find contains eight-four coins of Gordian III struck between his accession and A.D. 240; as a group these show considerably less wear than the earlier ones. Most of the hoard was accumulated between 238 and 249, during the consulships of M. Asinius Sabinianus (until A.D. 241/2) and L. Egnatius Victor Lollianus (until 249/50). These two men earned the reputation of conferring just and quiet government, and the province recovered from the excesses of Maximinus. The *polis* of Smyrna praised Lollianus as foremost among rhetoricians, and strove to develop friendly relations with the nearby cities.<sup>5</sup> The hoarder amassed upwards of a thousand coins.

During the first three years accumulation was gradual. But Gordian's concentration of troops in the east provided the opportunity for a more rapid rate of saving. In 242, having repelled barbarian attacks along the lower Danube, the emperor and his Praetorian Prefect hastened across Asia on their way to relieve Antioch and Syria from the Persians. They had with them a considerable number of troops, including detachments of at least two legions, IV Flavia and V Macedonica. There were probably others as well.<sup>6</sup>

D. Magie has remarked that Asia had to endure the passage of this army. The effect of this is seen in the Smyrna hoard, as the rate of accumulation increased noticeably. Coins of the first two issues

<sup>5</sup> General conditions in C. J. Cadoux, *Ancient Smyrna* (1938), 295–296, and D. Magie, *Roman Rule* (1950), I. 700. Lollianus: *SEG* II. 652. Relations: list and sources in Cadoux, 295, nn. 3–7, and 296, n. 7.

<sup>6</sup> Gordian's problems: *SHA* 3 *Gord.* XXIII. 4–5; XXVI. 3–5, and the comments of W. Ensslin in *CAH* XII (1939), 86–87 and D. Magie, *Roman Rule* (1950), I. 697. See, further, P. W. Townsend, "The Administration of Gordian III," *YCIS* IV (1934), 128. Evidence for the troop movements is carefully collected by K. Pink, "Antioch or Viminacium," *NC* 1935, 98–99.

of Gordian, struck 238–240, were collected near Smyrna at a rate between 3.7 and 8.9% of our whole sample number. But of the third issue, which appeared in 241, and which the marching soldiers would have had to spend in 242, the rate rose to between 7.1 and 8.4%. With the fourth issue, struck between 242 and 243 mostly after the troops had crossed Asia, the percentages fell back to between 4.7 and 7.9%, an approximate return to conditions existing before the deployment of the legions. The passage of an army, therefore, must of itself have forced a certain rearrangement of wealth. The soldiers spent their pay, which some people were able to gain and amass, while other people were being compelled to provide money and services to the army—taxes and *angareia*—and thereby lost wealth. The extensive movements of the numerous armies which were called into being between 235 and 284 ultimately affected virtually the whole empire, and this turmoil must have been one significant cause of the economic revolution of the third century, which did so much damage to the old, established landowning families of the ancient world. It helped in its own way to redistribute wealth among the new men thrown up by the political upheavals of the period of military anarchy, and the Smyrna hoard affords one small example of the process.<sup>7</sup>

The return across Asia Minor of part of the troops collected in the east followed Philip's murder of Gordian around July, 244. The movement left another similar deposit in the Smyrna hoard, but thereafter things were quiet for some time.<sup>8</sup>

The sources of wealth of the hoarder began to dry up after the beginning of Rome's second millenium in 248. The northern frontier was heavily assailed by Carpi, Goths, and other Germanic peoples. The situation was momentarily held in check by the early victories of Decius, but even in the reign of this emperor, disturbances of one kind or another severely limited the savings of the Smyrnaean. Only sixty-nine antoniniani of Decius and his family found their way into the hoarder's chest. No doubt the worn Philips and Gordians were also acquired about now. But there were economic difficulties—a

<sup>7</sup> D. Magie's remark in *Roman Rule* (1950), I. 697.

<sup>8</sup> The chronology of Philip's reign is now dealt with by R. A. G. Carson, "The Coinage and Chronology of A.D. 238," *ANSCent. Publ.* (1958), 183. Return of the troops: K. Pink, "Antioch or Viminacium," *NC* 1935, 112.

shortage of bread at Smyrna in the spring of 250. There was vague uncertainty and fear—the repression of the Christians after Decius' empire-wide decree.<sup>9</sup>

After Decius' unfortunate death in battle in 251, Smyrna was even more depressed, and only eighteen coins struck between 251 and 257 could be accumulated in the hoard. Smyrna herself began to live in yearly fear of barbarian attack. Furthermore, perhaps as early as 251, the second great plague in a century began to infect the empire, bringing in its train such numbers of deaths of people as the world has seldom known. In 253, disaster threatened when the Goths passed Smyrna, attacking and ravaging the territory of her great rival, Ephesus, only some fifty-five miles to the south. Smyrna herself may have suffered an actual depredation, too. Our literary sources are scanty and concerned only with threats to the great historic shrines at Ephesus and Pessinus. But, since the Goths came from the Black Sea, and since Smyrna is north of Ephesus, the city certainly lay just to one side of their advance, and may, therefore, have been damaged. At any rate, Germanic peoples were actively sailing in the Aegean, and the economic dislocation they caused is attested in no uncertain terms by the appearance of only eighteen coins struck between 251 and 257; of these, fourteen having been struck before 254. The effect of the Germans was felt not only in the tangible damage they did, but also in the anxiety and terror that the approach of barbarians always excited among the civilized, city people of the classical world.<sup>10</sup>

The situation grew steadily worse. Bithynia was attacked in 256 or 257, and at Chalcedon the garrison actually fled and abandoned the city. Nicaea and Nicomedia were plundered, along with Cius and Apamaea-Myrlaea. The hoarding at Smyrna came to an end in A.D. 257/8, with the saving of three coins of Valerian (*RIC* 106, 248, and 271) struck in 257. A Gothic raiding party probably turned south from Bithynia, and for a time threatened the coast of Ionia before

<sup>9</sup> C. J. Cadoux, *Ancient Smyrna* (1938), 297–299; D. Magie, *Roman Rule* (1950), I. 703. Bread shortage: *Mart. Pion.* VII. 1. Christians: *ibid.*, and Eus. *H.E.* VII. 15. 47.

<sup>10</sup> These attacks are outlined by A. Alföldi in *CAH* XII (1939), 146, 165–169. The sources are collected and discussed by D. Magie, *Roman Rule* (1950), I. 702–706; II. 1566–1567, n. 28.

they actually laid parts of it waste in 262 or 263.<sup>11</sup> We must suppose that in this year, 257/8, our Smyrnaean fled from them in fear of his life, first having buried his silver, and, for reasons unclear to us, never returned to claim it. Thus passed from the apocalyptic age of the third century an unnamed person, manner and cause of death unknown.

<sup>11</sup> Sources for these attacks include *SHA Gall.* IV. 7; VI. 2; VII. 3; XI. 1; XII. 6; and XIII. 8, which refer to attacks later than these. Zos. I. 28. 1; Eutrop. IX. 8. 2; Amm. Marc. XXXI. 5. 15; Oros. VII. 22. 7 refer to the ones outlined here. The vexed problems of chronology are dealt with by D. Magie, *Roman Rule* (1950), I. 706; II. 1566–1567, n. 28. See, too, A. Alföldi in *CAH* XII. (1939), 147–148; C. J. Cadoux, *Ancient Smyrna* (1938), 298–299.



## KEY TO THE PLATES

The illustrations in the plate section are arranged in such a way as to present visually the lines of development of obverse portraiture discussed in the text. The illustration of the reverse of each coin is to be found in the corresponding position on the facing plate.

### PLATE I

1. Gordian III: *RIC* 1, Smy. No. 37.
2. Gordian III: *RIC* 1, Smy. No. 32.
3. Gordian III: *RIC* 15, Smy. No. 92.
4. Gordian III: *RIC* 5, Smy. No. 76.
5. Gordian III: *RIC* 5, Smy. No. 73.
6. Gordian III: *RIC* 19, Smy. No. 108.
7. Gordian III: *RIC* 3, Smy. No. 53.
8. Gordian III: *RIC* 3, Smy. No. 54.
9. The Smyrna hoard contains no *RIC* 17.
10. Gordian III: *RIC* 6, Smy. No. 86.
11. Gordian III: *RIC* 6, Smy. No. 89.
12. Gordian III: *RIC* 20, Smy. No. 111.
13. Gordian III: *RIC* 2, Smy. No. 46.
14. Gordian III: *RIC* 2, Smy. No. 44.
15. Gordian III: *RIC* 16, Smy. No. 99.
16. Gordian III: *RIC* 4, Smy. No. 68.
17. Gordian III: *RIC* 4, Smy. No. 67.
18. Gordian III: *RIC* 18, Smy. No. 102.

PLATE II

1. Gordian III: *RIC* 19, Smy. No. 106.
2. Gordian III: *RIC* 39, Smy. No. 182.
3. Gordian III: *RIC* 56, Smy. No. 205.
4. Gordian III: *RIC* 15, Smy. No. 94.
5. Gordian III: *RIC* 38, Smy. No. 170.
6. Gordian III: *RIC* 55, Smy. No. 202.
7. The Smyrna hoard contains no *RIC* 17.
8. Gordian III: *RIC* 34, Smy. No. 117.
9. Gordian III: *RIC* 51, Smy. No. 188.
10. Gordian III: *RIC* 20, Smy. No. 112.
11. Gordian III: *RIC* 35, Smy. No. 134.
12. Gordian III: *RIC* 52, Smy. No. 191.
13. Gordian III: *RIC* 18, Smy. No. 104.
14. Gordian III: *RIC* 37, Smy. No. 161.
15. Gordian III: *RIC* 53, Smy. No. 195.
16. Gordian III: *RIC* 16, Smy. No. 96.
17. Gordian III: *RIC* 36, Smy. No. 137.
18. Gordian III: *RIC* 54, Smy. No. 199.

PLATE III

1. Gordian III: *RIC* 70, Smy. No. 251.
2. Gordian III: *RIC* 84, Smy. No. 342.
3. Gordian III: *RIC* 154, Smy. No. 618.

4. Gordian III: *RIC* 71, Smy. No. 257.
5. Gordian III: *RIC* 86, Smy. No. 398.
6. Gordian III: *RIC* 144, Smy. No. 545.
7. Gordian III: *RIC* 63, Smy. No. 213.
8. Gordian III: *RIC* 83, Smy. No. 268.
9. Gordian III: *RIC* 151, Smy. No. 589.
10. Gordian III: *RIC* 65, Smy. No. 221.
11. Gordian III: *RIC* 91, Smy. No. 444.
12. Gordian III: *RIC* 148, Smy. No. 569.
13. Gordian III: *RIC* 67, Smy. No. 223.
14. Gordian III: *RIC* 88, Smy. No. 413.
15. Gordian III: *RIC* 147, Smy. No. 564.
16. Gordian III: *RIC* 68, Smy. No. 230.
17. Gordian III: *RIC* 95, Smy. No. 487.
18. Gordian III: *RIC* 140, Smy. No. 521.

#### PLATE IV

1. Gordian III: *RIC* 143 (Rome), Smy. No. 533.
2. Gordian III: *RIC* 212 (Antioch), Smy. No. 655.
3. Gordian III: *RIC* 213 (Antioch), Smy. No. 656.
4. Gordian III: *RIC* 153 (Rome), Smy. No. 603.
5. Gordian III: *RIC* 214 (Antioch), Smy. No. 673.
6. Gordian III: *RIC* 216 (Antioch), Smy. No. 685.
7. Gordian III: *RIC* 145 (Rome), Smy. No. 557.

8. Gordian III: *RIC* 209 (Antioch), Smy. No. 635.
9. Gordian III: *RIC* 210 (Antioch), Smy. No. 641.
10. Philip I: *RIC* 71 (Antioch), Smy. No. 1113.
11. Otacilia: *RIC* 127 (Antioch), Smy. No. 1118.
12. Philip II: *RIC* 213 (Antioch), Smy. No. 1122.

PLATE V

1. Gordian III: *RIC* 144, Smy. No. 547.
2. Philip I: *RIC* 49b, Smy. No. 1033.
3. Philip I: *RIC* 48b, Smy. No. 1018.
4. Gordian III: *RIC* 154, Smy. No. 610.
5. Philip I: *RIC* 36b, Smy. No. 936.
6. Philip I: *RIC* 31, Smy. No. 917.
7. Gordian III: *RIC* 153, Smy. No. 606.
8. Philip I: *RIC* 52, Smy. No. 1044.
9. Philip II: *RIC* 216c, Smy. No. 1123.
10. Gordian III: *RIC* 148, Smy. No. 566.
11. Philip I: *RIC* 32b, Smy. No. 924.
12. The Smyrna hoard contains no *RIC* 123c.
13. Gordian III: *RIC* 145, Smy. No. 558.
14. Philip I: *RIC* 41, Smy. No. 956.
15. Philip I: *RIC* 38b, Smy. No. 948.
16. Gordian III: *RIC* 140, Smy. No. 516.
17. Philip I: *RIC* 47, Smy. No. 1006.
18. Philip I: *RIC* 26b, Smy. No. 817.

## PLATE VI

1. Philip I: *RIC* 44 b, Smy. No. 974.
2. Philip I: *RIC* 59, Smy. No. 1068.
3. Philip I, *RIC* 12, Smy. No. 760.
4. Philip I: *RIC* 27 b, Smy. No. 844.
5. Philip I: *RIC* 57, Smy. No. 1053.
6. Philip I: *RIC* 15, Smy. No. 765.
7. Philip II: *RIC* 218 d, Smy. No. 1135.
8. The Smyrna hoard contains no *RIC* 227 or 231 c.
9. Philip II: *RIC* 224, Smy. No. 1145.
10. Otacilia: *RIC* 125 c, Smy. No. 1116.
11. The Smyrna hoard contains no *RIC* 129.
12. The Smyrna hoard contains no *RIC* 116 b.
13. Philip I: *RIC* 3, Smy. No. 708.
14. Philip I: *RIC* 62, Smy. No. 1088.
15. Philip I: *RIC* 19, Smy. No. 770.
16. Philip I: *RIC* 28 c, Smy. No. 891.
17. Philip I: *RIC* 5, Smy. No. 727.
18. Philip I: *RIC* 21, Smy. No. 788.

## PLATE VII

1. Philip I: *RIC* 7 (Rome), Smy. No. 736.
2. Philip I: *RIC* 58 (Rome), Smy. No. 1062.
3. Philip I: *RIC* 60 (Milan), Smy. No. 1075.
4. Philip I: *RIC* 9 (Rome), Smy. No. 749.

5. Philip I: *RIC* 25 b (Rome), Smy. No. 809.
6. Philip I: *RIC* 61 (Milan), Smy. No. 1084.
7. Philip II: *RIC* 223 (Rome), Smy. No. 1142.
8. Philip II: *RIC* 230 (Rome), Smy. No. 1152.
9. Philip I: *RIC* 63 b (Milan), Smy. No. 1101.
10. The Smyrna hoard contains no *RIC* 115.
11. Otacilia: *RIC* 130 (Rome), Smy. No. 1119.
12. Decius: *RIC* 38a (Milan), Smy. No. 1209.
13. Philip I: *RIC* 8 (Rome), Smy. No. 741.
14. Philip I: *RIC* 24c (Rome), Smy. No. 799.
15. Philip I: *RIC* 51 (Viminacium), Smy. No. 1043.
16. Philip I: *RIC* 10 (Rome), Smy. No. 751.
17. Philip I: *RIC* 65 (Rome), Smy. No. 1110.
18. Philip I: *RIC* 51 (Viminacium), Smy. No. 1038.



## PLATES



# I



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## GORDIAN III – ISSUE 1/2

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### GORDIAN III – ISSUES 1/2 AND 3

### III



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S. 618



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S. 398



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S. 545



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S. 213



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S. 221



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S. 444



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S. 569



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S. 223



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S. 413



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S. 564



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S. 230



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S. 487



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S. 521

### GORDIAN III – ISSUES 3, 4 AND 5

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## GORDIAN III – ISSUES 3, 4 AND 5

# IV



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S. 603



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## GORDIAN III



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## PHILIP I

## ANTIOCH

# IV



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S. 655



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S. 656



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S. 603



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## PHILIP I

## ANTIOCH



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S. 1018



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S. 610



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S. 936



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S. 917



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S. 606



8  
S. 1044



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S. 1123



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S. 566



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S. 924



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S. 558



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S. 956



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S. 948



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S. 516

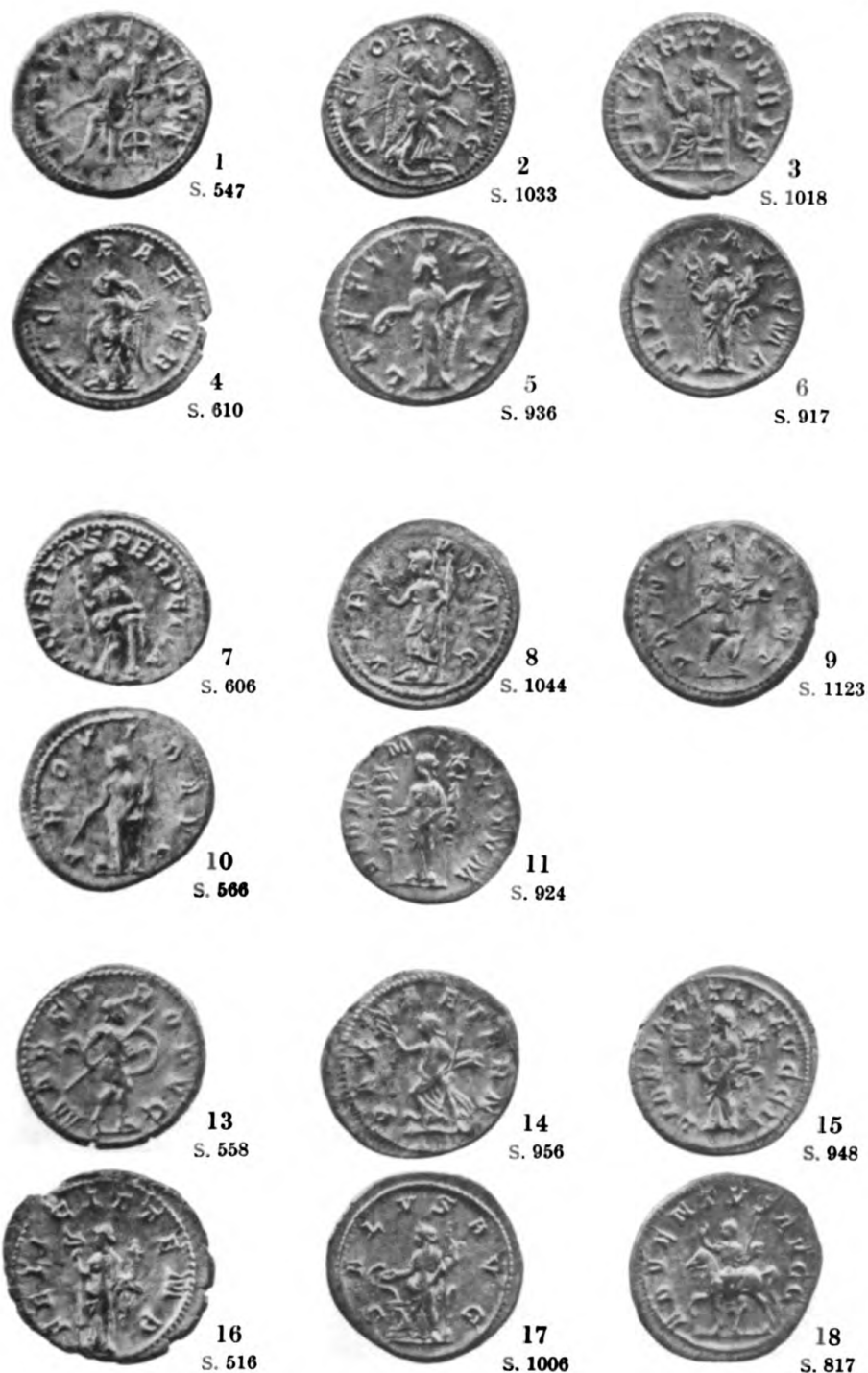


17  
S. 1006



18  
S. 817

GORDIAN III – ISSUE 5  
PHILIP I – ISSUES 1 AND 2



GORDIAN III – ISSUE 5  
 PHILIP I – ISSUES 1 AND 2

# VI



**1**  
S. 974



**2**  
S. 1068



**3**  
S. 760



**4**  
S. 844



**5**  
S. 1053



**6**  
S. 765



**7**  
S. 1135



**9**  
S. 1145



**10**  
S. 1116



**13**  
S. 708



**14**  
S. 1088



**15**  
S. 770



**16**  
S. 891



**17**  
S. 727



**18**  
S. 788

## PHILIP I – ISSUES 3, 4 AND 5/6

# VI



1  
S. 974



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S. 1068



3  
S. 760



4  
S. 844



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S. 1053



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S. 765



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S. 770



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PHILIP I - ISSUES 3, 4 AND 5/6

# VII



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S. 1062



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S. 1075



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S. 809



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S. 1119



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S. 1209  
MILAN



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S. 741



14  
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15  
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16  
S. 751



17  
S. 1110



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VIMINACIUM

PHILIP I - ISSUES 5/6 AND 7

# VII



1  
S. 736



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MILAN



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VIMINACIUM

## PHILIP I - ISSUES 5/6 AND 7



NUMISMATIC NOTES AND MONOGRAPHS

No. 157

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no. 157

# LATE ROMAN AND BYZANTINE SOLIDI FOUND IN SWEDEN AND DENMARK

By JOAN M. FAGERLIE



THE AMERICAN NUMISMATIC SOCIETY  
NEW YORK

1967



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# NUMISMATIC NOTES AND MONOGRAPHS

*Number 157*



# Late Roman and Byzantine Solidi Found in Sweden and Denmark

By JOAN M. FAGERLIE



THE AMERICAN NUMISMATIC SOCIETY

NEW YORK

1967

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1000

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*IN MEMORY OF  
MY PARENTS*



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## FOREWORD

The discovery in Sweden and Denmark of more than eight hundred late Roman and Byzantine solidi dating from the fifth and sixth centuries poses an historical enigma that has puzzled scholars for nearly a hundred years. Some eight hundred gold coins is a noteworthy number when one considers the distance between the Mediterranean world and the Baltic Sea and the fact that this was a period of great instability and decline. No other area on the Continent outside the imperial boundaries approaches Scandinavia in the number of finds; almost everywhere else there is a general dearth of material from this period. Moreover, the coins are concentrated on three tiny islands in the Baltic—Öland, Gotland and Bornholm. Their presence there cannot be an accident as a number of scholars have realized.

The solidi under discussion were not the earliest coins to reach the North. Thousands of imperial denarii from the second century have been discovered in the same areas in Scandinavia and in the fourth century some gold coins, also solidi, were introduced.<sup>1</sup> The latter are distinct from the fifth and sixth century hoards, however, and are found predominantly in western Scandinavia. When the fifth and sixth century solidi close with Justinian I, the import of coins in the North stops for about 250 years until the Viking period begins.<sup>2</sup>

The contrast between the situation in Scandinavia in the fifth century and that in other parts of Europe is quite striking. A few scat-

<sup>1</sup> Other metals in both periods are occasionally found also. The literature is cited in N. L. Rasmusson's, "Guldet i Norden under senmedeltiden," *Proxima Thule. Sverige och Europa under forntid och medeltid* (Stockholm, 1962), 182. See also Niels Breitenstein, "De romerske møntfund fra Gudme Herred," *NNA* 1942, 69-98; "De romerske møntfund fra Fyen udenfor Gudme Herred," *NNA* 1943, 1-20; "De romerske møntfund fra den sjællandske øgruppe," *NNA* 1946, 1-34; Jørgen Balling, "De romerske møntfund fra Jylland," *NNA* 1962, 5-78.

<sup>2</sup> A solidus of Phocas has been found in Hälsingland in Sweden, Werner Knapke, "Aurei- und Solidi-vorkommen an der Südküste der Ostsee," *AA* XII, 1941, Table XI.

tered finds and an occasional hoard of fifth century solidi occur in all parts of the Continent but the only concentration in any way comparable to that in eastern Scandinavia is found at the mouth of the Vistula River in Poland. There the hoards have very much the same character as the Baltic island hoards, occur in great numbers and seem to be part of the same activity that accounts for the Scandinavian coins.<sup>3</sup>

In view of all this, the solidi in Scandinavia pose an historical problem. It is not known why they are there, who the carriers were, by what route or routes the coins reached the Baltic, or why the series closes in the mid-sixth century. There are numerous other questions involved and all will have implications for the interpretation of the economic and political life in the fifth and sixth centuries both for the late Roman empire and the Scandinavian region.

Thus far no answer to any of the questions posed above has been generally accepted. The difficulties lie in the meagerness of the literary sources for this period, the inconclusiveness of the archaeological material, and the fact that the basic materials for a solution of the problem, the coins themselves, have not been fully utilized.

The major purpose of this study is to provide a comprehensive analysis of the coins whose full potential for information had not been realized. A catalogue containing all pertinent data has been prepared since, with the exception of the Danish finds, these coins have never been adequately described. Full information on the hoards has been assembled in an effort to bring Janse's list up to date.<sup>4</sup> The numismatic material in its entirety has been examined with reference to die identities, relative wear and the nature and distribution of the finds. Literary and archaeological sources have been treated cursorily, for their contribution to an understanding of the phenomenon under consideration is inconclusive. It is only the coins themselves that

<sup>3</sup> The find material from the Continent was also collected and analyzed for the purpose of determining the route. The results are summarized on pp. 166-68 and it is hoped that this material can be published separately at a later date. I am very much indebted to Walter Hävernack, Gert and Vera Hatz, Peter Berghaus and many other European colleagues who generously aided in the collection of this material and whose interest in this study has been a great encouragement to me.

<sup>4</sup> Olov Robert Janse, *Le travail de l'or en Suède à l'époque mérovingienne* (Orléans, 1922).

can provide clues to the solution of our problem. Once the nature of the solidi activity is established, the scanty literary and archaeological evidence prove more significant.

This monograph was the subject of my doctoral dissertation presented to the University of Washington in 1965. The text has been revised in parts for this publication. I should like to express my appreciation to the American Association of University Women for granting me the Florence R. Sabin Fellowship for 1958–59 which enabled me to visit Denmark and Sweden and examine the material pertinent to this study. A second year devoted to research was made possible through a Graduate Fellowship from the American Numismatic Society, for which I am also grateful. The research abroad was carried out under most enjoyable working conditions in the Royal Coin Cabinets of Denmark and Sweden where every courtesy was extended me by Georg Galster in Copenhagen and Nils L. Rasmusson in Stockholm. Many individuals have aided me in the preparation and final stages of this study and I should like to express my sincerest thanks to all of them. I am particularly indebted to Margaret Thompson, Alfred R. Bellinger, Solomon Katz and Leslie A. Elam.



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## LIST OF EMPERORS<sup>5</sup>

### WESTERN EMPIRE

Honorius	January 395—August 423 ( <i>Augustus</i> , January 393)
Valentinian III	October 425—March 455
Majorian	April 457—August 461
Libius Severus	November 461—November 465
Anthemius	April 467—July 472
Glycerius	March 473—Spring 474
Julius Nepos	June 474—480 (fled Italy, August 475)
Romulus Augustus	October 475—September 476

### EASTERN EMPIRE

Arcadius	January 395—May 408 ( <i>Augustus</i> , January 383)
Theodosius II	May 408—July 450 ( <i>Augustus</i> , January 402)
Marcian	August 450—January 457
Leo I	February 457—January 474
Leo II/Zeno	February 474—Autumn 474
Zeno first reign	Autumn 474—January 475
second reign	August 476—April 491
Basiliscus (B/Marcus)	January 475—August 476
Leontius	July 484—488
Anastasius	April 491—July 518
Justin I	July 518—August 527
Justinian I	August 527—November 565 ( <i>Augustus</i> , April 527)

<sup>5</sup> Dates based on Ernest Stein, *Histoire du bas-empire* (2 vols., Paris, Brussels, Amsterdam, 1949–59).



## INTRODUCTION

The solidi found in Sweden and Denmark cover the century and a half from the death of Theodosius I in 395 down to the latter part of the reign of Justinian I (ca. 550). This roughly corresponds with the period known as the Migration Age.<sup>6</sup> The movement of peoples began before this and continued after Justinian, but the brunt of the invasions, resulting in the loss of the West, was felt in the fifth century.

At the beginning of the fifth century, the throne was occupied by Arcadius and Honorius, the two sons of Theodosius I. Just before his death in 395, Theodosius expressed his desire that the two brothers share the throne and Arcadius, already acting as regent in Constantinople, assumed control of the East and Honorius became emperor of the West.

Almost immediately the Germanic threat, which was to plague both East and West for most of the following century, made itself felt. This threat came from within and from without. Pressing on the frontiers were the masses of barbarian tribes who wanted living space within the empire; within were the Germanic soldiers who had taken service in the imperial armies and who had, in some instances, achieved positions of prominence. They provided energy and leadership but their loyalty when tested was as often as not to their own people who were now the enemies of Rome.

In 395 the Visigoths, who had been settled in Lower Moesia by Theodosius I, revolted and under the leadership of Alaric began a devastating march through Macedonia and Thrace. Virtually unopposed, they ravaged Greece before turning westward. In the early years of the fifth century Alaric and his forces carried out two invasions of Italy which resulted in the sack of Rome in 410. Under Athaulf, successor to Alaric, they entered Gaul in 412. Elsewhere

<sup>6</sup> General works for the period: J. B. Bury, *History of the Later Roman Empire from the Death of Theodosius I. to the Death of Justinian* (2 vols., London, 1913); *Cambridge Medieval History*, vol. I (Cambridge, Eng., New York, 1924); Alfons Dopsch, *The Economic and Social Foundations of European Civilization* (London, 1937); Ernest Stein, op. cit.

other tribes were crossing the frontiers. In 406, the Vandals, Suevi and Alani crossed the Rhine and began marching through Gaul and Spain. The Burgundians, too, had established a kingdom around Worms by 414. Sporadic and ineffectual attempts to regain the western provinces were made by the Romans, but eventually the Vandals were firmly settled in Africa, the Visigoths and Suevi in Spain, the Burgundians in the Rhone valley and the Franks in Gaul. For all practical purposes the western provinces were lost and Italy itself under attack. In the years between the death of Theodosius I in 395 and the conquest of Odovacar in 476, Italy suffered invasions and attacks by Visigoths, Vandals, Ostrogoths and Huns. In none of these did the invaders attempt to establish control over Italy but they plundered the cities, ravaged the countryside, and were able to force payments and concessions of other territories from the Romans. In 476, however, the barbarians were given land grants in Italy after Odovacar had deposed Romulus Augustus, the last Roman emperor of the West.

In the East, the initial threat of Germanic pressure had been temporarily averted by 400. The next great danger came from the Huns who forced Theodosius II to begin tribute payments in 424. This tribe of Asiatic nomads occasionally fought for the empire but only when it served their purpose and they remained a threat to both East and West until 454. In 451, the Huns and their allies were defeated in the battle of Maurica in Gaul. With the death of Attila shortly thereafter the subject tribes began revolting and the Hunnic empire collapsed.

Chief among the tribes subject to the Huns were the Ostrogoths who obtained their independence in 454 and were then settled as *foederati* in Pannonia with a promise of annual payments from Marcian. Discontented with conditions there, they harried the nearby provinces until 488 when Zeno persuaded Theodoric, king of the Ostrogoths, to lead his forces westward and replace Odovacar as his viceroy in Italy. This was accomplished by 493 and Italy remained in the hands of the Ostrogoths until the reconquest by Belisarius and Narses in the reign of Justinian I.

The East survived this movement of peoples but it was a costly survival for the state. It suffered not only the loss of the West, in-

cluding Italy, but also a financial depletion as thousands of pounds of gold poured out of the imperial treasury to pacify the barbarians. In 424 Theodosius II began paying 350 pounds of gold annually to Rugila, king of the Huns. When Attila and Bleda succeeded Rugila about 433, the payment was doubled to 700 pounds, but even this sum did not safeguard the imperial provinces against attack. After an encounter with the imperial armies who were decisively defeated in 443, Attila secured an immediate payment of 6000 pounds of gold plus an annual payment of 2100 pounds. The payments came from Theodosius II and also from Valentinian III in the West.

The tribute to the Huns continued through the reign of Theodosius, but his successor Marcian refused to meet the demands. The collapse of the Hunnic empire in 454, however, resulted in the independence of the Ostrogoths who were able to exact annual payments of 100 pounds of gold from Marcian. Leo was more reluctant to make these payments and as a result the Ostrogoths revolted in 461, forcing Leo to continue the annual stipend and to make up the payments in arrears.

These Ostrogoths—ruled by the three brothers, Walamir, Theodemir and Widemir—represented one branch of the tribe; a second branch had taken service in the imperial armies after 454. This latter group, under the command of Strabo, revolted after the death of Aspar, a Roman general of Germanic origin, and forced from Leo an annual stipend of 2000 pounds of gold in addition to territorial concessions and the titles, Master of Soldiers and King of the Ostrogoths, for Strabo. In the struggle for the throne between Basiliscus and Zeno which followed the death of Leo, Strabo supported Basiliscus and Theodoric, Zeno. When Zeno was restored to power, the alliances fluctuated; the title of Master of Soldiers was passed from one Goth to the other and each in turn was recognized as King of the Ostrogoths. The death of Strabo in 481 left Theodoric's Goths as the sole threat to the empire until 488 when Zeno induced them to attack Odovacar and establish themselves in Italy. Although other barbaric tribes soon took their place, they were less formidable and were dealt with in the traditional manner by playing one tribe against another and by payments.

The payments exacted by the barbarians were presumably made in *solidi*, the coinage represented in the Scandinavian hoards and



the basic coinage of the fifth and sixth centuries.<sup>7</sup> Coins were struck in three metals during this period but the bronze was debased and the silver so negligible that the burden of the economy rested upon the gold. Its basic unit was the solidus of 1/72nd of a pound, weighing 4.54 grams and introduced by Constantine I who lowered the weight of the aureus which had been minted at 60 to the pound since the reform of Diocletian. In addition to the solidus, a semis or half-solidus of 2.27 grams and a 1 1/2 *scripulum* piece of 1.70 grams were introduced. The latter was not easily exchanged for the solidus, however, and was replaced in 383 under Theodosius I by the triens, a third of the solidus, weighing 1.51 grams. Thus, at the beginning of the fifth century the gold currency consisted of the solidus, the semis and the triens. The solidus was by far the most common coin while the triens and in particular the semis were quite rare.

In addition to the official currency issued by the emperors in the fifth and sixth centuries there were barbaric coinages, also represented in the Scandinavian finds, which replaced the imperial coinage in the West.<sup>8</sup> Even before the fall of Italy in 476 the various Germanic tribes began to experiment with coinage. The first attempts took

<sup>7</sup> Introductory material and catalogues: R. A. G. Carson, P. V. Hill and J. P. C. Kent, *Late Roman Bronze Coinage, A.D. 324-498* (London, 1960); Henry Cohen, *Description historique des monnaies frappées sous l'empire romain* (8 vols., 2nd ed., Paris, London, 1880-92); J. W. E. Pearce, *The Roman Coinage from A.D. 364 to 423* (London, 1933); *RIC IX* Valentinian I—Theodosius I (London, 1951); R. Ratto, *Monnaies byzantines* (Lugano, 1930); J. Sabatier, *Description générale des monnaies byzantines* (Paris, London, 1862); Jean Tolstoi, *Monnaies byzantines* (St. Petersburg, 1912-14); O. Ulrich-Bansa, *Moneta Mediolanensis* (Venice, 1949); Warwick Wroth, *Catalogue of the Imperial Byzantine Coins in the British Museum* (London, 1908).

<sup>8</sup> See Julius Friedländer, *Die Münzen der Ostgothen* (Berlin, 1844); *Die Münzen der Vandalen* (Leipzig, 1849); C. F. Keary, "The Coinages of Western Europe: From the Fall of the Western Empire till the Accession of Charlemagne," *NC* 1878, 49-72, 132-65, 216-58; Warwick Wroth, *Catalogue of the Coins of the Vandals, Ostrogoths and Lombards and of the Empires of Thessalonica, Nicaea and Trebizond in the British Museum* (London, 1911); F. F. Kraus, *Die Münzen Odovacars und des Ostgotenreiches in Italien* (Halle, 1928); P. Le Gentilhomme, "Le monnayage et la circulation monétaire dans les royaumes barbares en occident (Ve-VIII<sup>e</sup> siècle)," *RN* 1943, 45-112; Wilhelm Reinhart, "Die Münzen des tolosanischen Reiches der Westgoten," *DJN* I, 1938, 107-35; "Die Münzen des westgotischen Reiches von Toledo," *DJN* III, 1940, 69-101; "Die Münzen des Swebenreiches," *Mitteilungen der bayerischen numismatischen Gesellschaft* LV, 1937, 151-98.

place in the western provinces as they slipped from imperial hands and were undoubtedly inspired by the need to fill the gap left by the closing of the imperial mints. These earliest coinages were imitations with no indication of the new issuing authority. Their legends were often unintelligible and the details of the type so misrendered as to be meaningless. Later, some silver and bronze issues were struck with the name and portrait of the Germanic chief and it is only these issues that can be identified with certainty. For the rest, and this is particularly true of the gold, there are numerous problems involved. It is often difficult to determine whether they are official or barbaric issues and if the latter, to what particular tribe they should be assigned. Issues have been attributed to the Suevi, Vandals, Visigoths, Ostrogoths, Burgundians and Franks, but not always on firm grounds. The criteria for their identification are style, provenance and the monograms which appear on the later issues. Style alone is often an elusive factor and must be checked against other evidence. For example, the huge class of "Vandalic" bronze is now considered to be imperial coinage since its wide distribution outside of Vandalic territory is convincing proof that it was not Vandalic in origin.<sup>9</sup>

Although meaningless legends and types are an indication of barbaric manufacture, it is also true that the Italian mints of the fifth century, notably Milan, issued coinage that is characterized by a very crude style and occasional legend irregularities. Furthermore, not all imitative coinages are of crude workmanship. The Ostrogothic issues, identified by the monogram of Theodoric, are often extremely fine specimens.

Many of these imitations are to be found in the catalogue. Some, like the Ostrogothic issues, are identifiable series; others are published varieties but their specific attribution is still uncertain. There are also solidi which are obviously barbaric but which bear no comparison to published specimens. With three exceptions these varieties have been found exclusively in Scandinavia.

<sup>9</sup> Margaret Thompson, *The Athenian Agora II: Coins from the Roman through the Venetian Period* (Princeton, 1954), 3, 101 f.



**PART I:**  
**CATALOGUE AND COMMENTARY**



## ARRANGEMENT OF THE CATALOGUE

A total of 883 late Roman and Byzantine solidi are known to have been found in Sweden and Denmark.<sup>1</sup> Of these 726 are currently identifiable in Scandinavian collections and complete descriptions of 33 others can be found in the records, making a total of 759 coins which are incorporated in the catalogue. The remaining 124 coins were either dispersed or deposited in the collections at an early date without identifying labels regarding the find place.<sup>2</sup> Thus the material for this study consists of the 883 coins recorded as finds in the archives and literature, but the catalogue is restricted to the 759 coins for which complete descriptions are available while the study of the dies and the condition of the coins are further limited to those 726 coins which are still accessible.

The catalogue of 759 coins is arranged by emperors: first, western rulers from Honorius to Romulus Augustus, followed by eastern rulers from Arcadius to Justinian I. Under each emperor the coins are arranged by mint; eastern mints precede western mints. No at-

<sup>1</sup> The catalogue and find-list were compiled on the basis of material available in 1959. In 1961 the 47 solidi of the Lillön hoard were incorporated but no finds since then have been added. The bulk of the coins are in the Royal Coin Cabinets at the Statens Historiska Museum in Stockholm and the National Museum in Copenhagen. A few are held by the museums of Visby, Kalmar and Lund in Sweden and the Thorvaldsen Museum in Copenhagen. The locations are noted in the find-list.

The coins were incorporated in the Royal collections as a result of the regality systems in Denmark and Sweden which gave the Danish king possession of all gold and silver found in the realm and the Swedish king two-thirds of all antiquities found, with no compensation to either the finder or the owner of the property on which the find was made. Subsequent legislation in both countries granted compensation for all finds which, however, must be offered to the crown for purchase. Cf. Georg Galster, "Treasure-trove in Denmark," *Transactions of the International Numismatic Congress, London, 1936* (London, 1938) 299-304; Bengt Thordeman, "Coin-finds in Sweden: Legislation and Organization," in the same work, 320-23; Sir George Hill, *Treasure Trove in Law and Practice* (Oxford, 1936), 173-84.

<sup>2</sup> It is possible that some of these finds can be identified. N. L. Rasmusson has begun the reconstruction of the eighteenth century Ekerö hoard (Find No. 5).

tempt has been made to arrange the coins of a given emperor in their chronological order as issued. Imitations which can be assigned to a definite reign are placed after the regular issues; those which cannot be attributed to a particular emperor are listed at the end of the catalogue.

Much new material is provided by the Scandinavian finds. For the imperial coinage, many gaps in the officinae record have been closed and a number of hitherto unknown issues have been recovered. The barbaric imitations are of special interest in that they include many new or unpublished specimens.

The problem of the imitations is a disturbing one since little progress has been made in identifying and attributing these series but the additional comparative material presented here should be useful in the definitive study of these imitative coinages. In the catalogue that follows only those coins that are obviously barbaric, those with Germanic monograms or other distinguishing features which are without question products of non-imperial mints, have been included under the "imitations" heading. Among the official issues there may be other less easily detected imitations but because of the uncertainty involved it seemed prudent to refrain from making any barbaric attributions which cannot be firmly supported. All doubtful cases are discussed in the commentary.

The arrangement is not consistent throughout, but a strict consistency is impossible when a variety of official and non-official issues are involved. Nevertheless, the general pattern has been modified as little as possible.

Keys to the types and legends are given at the beginning of each emperor's coinage. For each coin, obverse and reverse types and legends, weight, die position,<sup>3</sup> condition, find-list number and catalogue references can be obtained.

Typical of the arrangement is the initial section under Honorius:

*Constantinople*

AI AI  $\begin{array}{c} * \\ | \\ \hline \end{array}$  CONOB Cohen 3

<sup>3</sup> The die positions tend toward a  $\uparrow$  or  $\downarrow$  axis and minor deviations from a strictly vertical axis have not been noted.

1. off.  $\Delta$  4.42 ↓ good. 113e

2. off. Z 4.41 ↓ worn. 219

A1 is the obverse legend and type found in the key which appears at the beginning of Honorius' list while a1 denotes the reverse. The mint mark  $\frac{*}{\text{CONOB}}$  listed on the same line as A1 a1 indicates that all coins under that heading bear the same mark. If a reference is given here also, it serves for all the coins under the heading, but where catalogues are more detailed and separate entries exist for variants, the reference is given with each coin.<sup>4</sup>

For No. 1, the officina is  $\Delta$ , weight is 4.42 grams, die-position is ↓, condition is good, and the coin belongs to Find No. 113e which is Stenåsa, Öland. No. 2 is of the same type but has officina Z, its weight is 4.41 grams, die-position is ↓, condition is worn and it is from Find No. 219, Soldatergård, Bornholm.

This arrangement is modified for the coinages of the empresses, for the single specimen of Leontius where keys are not necessary and for the imitations which usually do not lend themselves to the established form. When the imitations are comparable to the official coinage, the keys to the official issues are used. Some of the imitations, however, are of different types and in such cases, obverse and reverse have to be described separately. Furthermore, new keys were made for the imitations of Anastasius, Justin I and Justinian I since these imitations differ from the official issues, are numerous and form a consistent series.

The coins are listed under the emperor identified in the legend even though this is not always the issuing authority. Theodosius, for example, struck certain series in the name of Valentinian. Coins of the empresses are placed with those of the issuing emperor whenever

<sup>4</sup> This is true of the Milan series throughout which is covered in Ulrich-Bansa's volume. References to series which were struck at different officinae, however, are given inclusively with the heading of each issue. For example, under Theodosius II, Nos. 201–207 of type A1 d3 are identified as Sabatier 13 and Tolstoi 47 f. with a note on which officinae represented in the Scandinavian finds are not listed in either of these publications. This arrangement was not possible with Zeno's coins since both Sabatier and Tolstoi treat as one issue at least two separate issues. In this case, a reference to Tolstoi is given with each officina.



the relationship can be determined. Thus, coins of Galla Placidia, Eudocia and Pulcheria are listed under Theodosius because it is known that these particular issues were made under his authority.

## THE CATALOGUE

### HONORIUS

#### *Obverse legends*

A DNHONORI VSPFAVC

#### *Reverse legends*

- a CONCORDI AAVCC
- b CONCORDI AAVCCC
- c VICTORI AAVCCC

#### *Obverse types*

- 1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.
- 2 Bust of emperor r., diademed, draped and cuirassed.

#### *Reverse types*

- 1 Constantinople seated facing, head r., holding sceptre in r. hand and Victory on globe in l.; r. foot on prow.
- 2 Emperor in military dress, standing r., holding standard in r. hand and Victory on globe in l.; l. foot on captive.

#### *Constantinople*

A1 a1<sup>5</sup>  $\frac{*}{\text{CONOB}}$  Cohen 3

- 1. off.  $\Delta$  4.42 ↓ good. 113e
- 2. off. Z 4.41 ↓ worn. 219

PLATE VII

A1 b1<sup>6</sup>  $\frac{*}{\text{CONOB}}$  Cohen not

- 3. off. B 4.43 ↓ fair. 115

PLATE VII

<sup>5</sup> Nos. 194–195 (Constantinople) and 283 (Thessalonica) of Theodosius II are parallel issues to Nos. 1–2 and 4, respectively. See page 38.

<sup>6</sup> Nos. 196–198 of Theodosius are parallel issues to No. 3. See page 38.

*Thessalonica*

A1 a1  $\frac{* |}{\text{TES.OB.}}$  Cohen 3

4. 4.44 ↓ good. 115

PLATE VII

*Milan*

A2 c2  $\frac{M | D}{\text{COMOB}}$  Cohen 44; Ulrich-Bansa 61-61η

5. 4.42 ↓ worn. 122

PLATE I

6. 4.38 ↓ very worn. 137b

PLATE I

*Ravenna*

A2 c2  $\frac{R | V}{\text{COMOB}}$  Cohen 44

7. 4.48 ↓ fine. 99

8. 4.47 ↓ good. 110a

PLATE I

9. 4.38 ↓ pierced; fair. 86

10. 4.45 ↑ very worn. 183

11. 4.39 ↓ very worn. 17

12. 4.38 ↓ very worn. 182b

13.<sup>7</sup> 4.32 ↓ pierced; very worn. 87

PLATE I

14. 4.39 ↓ very worn. 122

PLATE I

15.<sup>8</sup> 4.40 ↑ very worn. 182c

PLATE I

*rev.*: € V l. and r. in field

16. 4.36 ↑ worn. 135

PLATE I

17. 4.32 ↑ pierced; very worn. 18

18. 4.38 ↑ very worn. 137b

19. 4.44 ↓ fine. 99

PLATE I

20. 4.42 ↓ good. 99

21. 4.42 ↓ worn. 135

<sup>7</sup> The pierced hole looks as though it may have obliterated a wreath which is characteristic of one imitative series (Visigothic?), but it is merely an illusion created by the neat piercing and looks the same from the reverse.

<sup>8</sup> The mint mark seems to read € V but it is a very tarnished specimen and one cannot be certain.

Twenty-one solidi of Honorius have been attributed to official mints. Most are clearly regular issues but the following are to some degree questionable: Nos. 5–6 from the mint of Milan and Nos. 10–18 from Ravenna. The first, however, are not noticeably different from the illustrations of Ulrich-Bansa's catalogue<sup>9</sup> and the Ravenna pieces show stylistic parallels with Nos. 7–9 and 19–21 which are indubitably genuine products of the Ravenna mint. Many of the questionable coins are well worn and this may account to some extent for their crude appearance. It should be remembered also that die-cutters in the official mints were sometimes guilty of erroneous lettering and careless workmanship.

In classifying these twenty-one coins as official, certain factors were considered. First of all, the epigraphy is accurate and normal.<sup>10</sup> The weights are all normal. Furthermore, there is no comparison between these specimens and published imitations. At this period the Suevian and Visigothic imitations were uniformly crude in portraiture and epigraphy, and the weights of the former were often below standard.

#### IMITATIONS OF HONORIUS

<i>Obv.</i> : (DN HONORIVS PF AVGV)		<i>Rev.</i> : (VICTORIA AVGGG)	
Bust of emperor r., diademed, draped and cuirassed.		Emperor in military dress, standing facing, holding long cross in r. hand and Victory on globe in l.; r. foot on serpent.	
22.	4.35 ↓ fair. 137b		PLATE XIII
	<i>obv.</i> : SNNSOΛR̅U CSNOΛVΓ	$\frac{ N}{ONO}$	
	<i>rev.</i> : R̅EΛHOO ΛVSNNC		
23.	4.39 ↓ fair. 212		PLATE XIII
	same dies as above		
24.	4.50 ↓ fair. 182a		PLATE XIII
	<i>obv.</i> : ONHONOPI V P̅HHTCC V N	$\frac{ N}{CONOC}$	
	<i>rev.</i> : OICTORI VVVCC		

<sup>9</sup> *Moneta Mediolanensis*, pl. VI, 61–617 (for coins of irregular style see pl. VI, A–B and for imitations, C–D).

<sup>10</sup> The only possible exception is No. 15 with an uncertain mint mark.

25. 4.21 ↓ very worn. 127  
same dies as above

PLATE XIII

*Obv.*: As above

*Rev.*: (VICTORIA AVCCG)

Emperor in military dress, standing r., holding standard in r. hand and Victory on globe in l.; l. foot on captive.

26. 4.50 ↓ good. 137b

PLATE XIII

*obv.*: same die as above

*rev.*: CCCCVAVT IIOTCAII

II | \\  
COMOC

27. 4.44 ↓ pierced; worn. 137b  
same dies as above

PLATE XIII

28. 4.42 ↑ fair. 209

PLATE XIII

*obv.*: CVAFP2V IRONONHND (retrograde)

image reversed

*rev.*: VICTORIA VVCCG (retrograde)

image reversed

D | N  
COMOB

The coins listed under Nos. 22–28 are obviously barbaric. Nos. 22–25 are imitations of the type introduced by Valentinian III but the obverse legend is clearly meant to be that of Honorius and thus they have been classified with his coins in the catalogue.<sup>11</sup> At the same time it is certain that they were manufactured at the earliest in the reign of Valentinian III and probably well after his reign (see section on identical dies, p. 122).<sup>12</sup> Nos. 26–27 are of the customary type of Honorius but are from the same obverse die as Nos. 24–25. These two coins also must post-date Honorius.

The marks in the field of these imitations, where normally the mint mark appears, are unusual. On Nos. 22–23 there is a single N in the right field which can be read as N or H. Nos. 24–25 have V/ N left and right in the field and Nos. 26–27, II \\. These marks are not readily identifiable as a copy of any of the regular mint marks but

<sup>11</sup> The obverse legend of Nos. 22–23 (which are of the same dies) is more blundered than those of Nos. 24–27 but still, I believe, was taken from a coin of Honorius. Moreover, the reverse is very similar to Nos. 24–25.

<sup>12</sup> According to Philip Grierson, such hybrid imitations, sometimes of emperors of different centuries, are quite common.

whether they have some other meaning cannot, at the present, be determined. The legends indicate that the Roman letters were not clearly understood by the die-cutters. Nos. 24-27 do not distinguish between N and H for example and many other letters are incorrectly formed although it is evident that the name of Honorius was being copied. The most correct form of the legend appears on No. 28 which, except for being retrograde, is fairly accurate. Here the mint mark is undoubtedly meant to be MD.

That these pieces are barbaric cannot be disputed but a more perplexing question concerns their origin.<sup>13</sup> The only published imitations of Honorius are identified as Suevian or Visigothic.<sup>14</sup> The Scandinavian specimens are not comparable to either group and, furthermore, in contrast to many of the Suevian pieces, the weights of the Scandinavian solidi are normal.

### VALENTINIAN III

#### *Obverse legends*

A DNVALENTIN IANVSPFAVC  
B DNPLA VALENTI NIANVS-  
PFAVC

#### *Reverse legends*

a VOTXXX MVLTXXXX  
b VICTORI AAVCCC  
c IMP.XXXXII'COS XVII'P'P'  
d VOTX MVLTX

#### *Obverse types*

- 1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.
- 2 Bust of emperor r., diademed, draped and cuirassed.

#### *Reverse types*

- 1 Constantinople seated l., holding globus cruciger in r. hand and sceptre in l.; shield to r.; l. foot on prow.
- 2 Victory standing l., holding long cross in r. hand.

<sup>13</sup> Some of the bungled letters on these and other imitations resemble Runic characters and, because of the close die linkage and their provenance, a Scandinavian origin must be considered. I hope eventually to pursue this possibility in greater detail.

<sup>14</sup> See studies of Keary, Reinhart and Le Gentilhomme cited above, p. xxiv, n. 8; also, Antonio M. de Guadan and Láscaris Comneno, "Las copias Suevas de los solidos de Honorio," *Nummus* V, no. 17 (Sept. 1958), 11-23.

- |   |  |
|---|--|
| <p>3 Bust of emperor l., diademed and in consular dress; holding mappa in r. hand and cross in l.</p> | <p>3 Emperor in military dress, standing facing, holding long cross in r. hand and Victory on globe in l.; r. foot on serpent with human head.</p> |
|   | <p>4 Emperor in military dress, standing r., holding standard in r. hand and Victory on globe in l.; l. foot on captive.</p>                       |
|   | <p>5 Emperor in consular dress, seated facing, holding mappa in r. hand and cross in l.</p>  |

*Constantinople*

A1 a1  $\frac{\text{CONOB}}{\text{CONOB}}$  \* Cohen 42

29.<sup>15</sup> off. Z 4.39 ↓ good. 115  
*obv.*: ...VSPA VCC

PLATE VIII

A1 b2  $\frac{\text{CONOB}}{\text{CONOB}}$  \* Cohen 17

30.<sup>16</sup> 4.46 ↓ fine. 115

PLATE IX

*West* COMOB

A1 c1  $\frac{\text{COMOB}}{\text{COMOB}}$  \* Cohen 4 var. (CONOB)

31.<sup>17</sup> 4.44 ↓ fair. 6

PLATE VIII

<sup>15</sup> Issued by Theodosius II in commemoration of his *tricennalia* celebrated ca. 430. Identical types exist for Theodosius (see his list), Pulcheria, Eudoxia and Eudocia. This reverse was also used by Leo I (Cat. No. 532).

<sup>16</sup> Marcian introduced this type and struck these coins for Valentinian, perhaps in hopes of recognition from him which, however, was not forthcoming for more than a year and a half. The coin can be dated to the early part of Marcian's reign. See A. A. Boyce, "Eudoxia, Eudocia, Eudoxia: Dated Solidi of the Fifth Century," *ANSMN* VI, 1954, 141.

<sup>17</sup> Issued by Theodosius II in commemoration of his forty-second imperium and seventeenth consulship in 443. The type is also known for Theodosius, Eudocia, Eudoxia, Placidia and Pulcheria (see under Theodosius). This one example of Valentinian and 54 of Theodosius are included in the Scandinavian finds.

## Milan

B2 b3  $\frac{M | D}{COMOB}$  Cohen 19; Ulrich-Bansa 90-90η

32. 4.43 ↓ worn. 137b  
*rev.*: M D l. and r. in field
33. 4.45 ↓ fair. 219
34. 4.32 ↓ fair. 116b PLATE II
35. 4.44 ↓ worn. 110c  
*rev.*: CONOB in ex.; N D l. and r. in field

## Rome

B2 b3  $\frac{R | M}{COMOB}$  Cohen 19

36. 4.36 ↓ fair. 19b PLATE XIX
37. 4.36 ↓ worn. 115 PLATE XIX
38. 4.39 ↓ very worn. 122
39. 4.42 ↓ fair. 137b PLATE II  
*obv.*: . in r. field
40. 4.40 ↓ worn. 99 PLATE XIX
41. 4.02 ↑ fair. 115 PLATE XIX
42. 4.44 ↑ fine. 115 PLATE II
43. 4.40 ↑ fine. 63
- 44.<sup>18</sup> 3.58 ↘ worn. 39
45. 4.46 ↓ worn. 108b
46. 4.38 ↓ pierced; good. 99 PLATE II
47. 4.17 ↓ pierced but refilled; worn. 72 PLATE XXIII
48. 4.36 ↑ worn. 18 PLATE II
49. 4.47 ↓ good. 99 PLATE II
50. 4.39 ↓ good. 99 PLATE II  
*rev.*: R N l. and r. in field
51. 4.48 ↓ worn. 205 PLATE II  
*rev.*: R N l. and r. in field

<sup>18</sup> Underweight but it has been clipped; the coin is die-linked with Nos. 45-46 which are of normal weight.

## Ravenna

B2 b3  $\frac{R \mid V}{COMOB}$  Cohen 19

52. 4.44 ↓ good. 115  
 53. 4.42 ↓ worn. 137b  
 54. 4.33 ↑ remains of attachment for loop; worn. 137b  
 55. 4.44 ↑ worn. 109a  
 56. 4.49 ↑ fine. 99 PLATE II  
 57. 4.40 ↓ worn. 99  
 58. 4.31 ↓ fair. 99  
 59. 4.42 ↓ worn. 99  
 60. 4.40 ↓ good. 99  
 61. 4.42 ↓ fine. 115  
 62. 4.40 ↓ fair. 122  
 63. 4.35 ↑ very worn. 120  
 64. 4.47 ↓ worn. 92c  
 65. 4.36 ↓ worn. 108b  
 66. 4.40 ↑ folded over; very worn. 122  
 67. 4.40 ↑ good. 63  
 68. 4.35 ↑ worn. 92c  
 69. 4.43 ↑ very worn. 220  
 70. 4.48 ↑ worn 94  
 71. 4.37 ↑ very worn. 90a  
 72. 4.36 ↑ pierced but refilled; fair. 51b  
 73. 4.36 ↑ fair. 121a  
 74. 4.38 ↑ fair. 6  
 75.<sup>19</sup> 4.41 ↓ pierced; worn. 212  
       *obv.*: ДИПЛАВАЛЕНТИ НИАНВСПФАВC  
 76. 4.38 ↓ worn. 219 PLATE II  
       *obv.*: ДИПЛАВАЛЕНТИ НИНВСПФАВC  
 77. 4.49 ↓ fine. 193 PLATE II  
 78. 4.39 ↓ worn. 64 PLATE II  
 79. 2.25 ↓ only one half of coin remains. 56b  
       *rev.*: R [ ]; attribution to Ravenna uncertain.

<sup>19</sup> Nos. 75–76 are of unusual style but cf. Ulrich-Bansa, pl. L, h (Valentinian) and l (Marcian).



14 *Late Roman and Byzantine Solidi*

- 80. known through literature only. 219  
*NNA* 1944, 46, no. 21.2
- 81. known through literature only. 219  
*NNA* 1944, 46, no. 21.3
- 82. known through literature only. 219  
*NNA* 1944, 46, no. 21.4
- 83. known through literature only. 203  
*NNA* 1944, 58, no. 23.1

B2 b4  $\frac{R \mid V}{COMOB}$  Cohen 23

84. 4.50 ↓ fair. 99  
*obv.*: DNPIA VALENTI NIANV2PFAVC

85. 5.49 ↓ with loop and border; worn. 199 PLATE XXI

B3 d5  $\frac{R \mid V}{COMOB}$  Cohen 41

86. 4.48 ↓ very worn. 118c PLATE II

The bulk of Valentinian's coins are western and, like those of Honorius, include some questionable official issues. The four coins of Milan are very crude in appearance but not unlike a particular series in Ulrich-Bansa which he considers an emergency issue and associates with payments to Attila.<sup>20</sup> The Rome coins (Nos. 36–51) lack uniformity and of the entire group only Nos. 42–43 seem wholly regular. A pellet in the obverse field of No. 39 is curious and often appears on barbaric issues (see below, n. 23). Similarly, a mint mark of R N on Nos. 50–51 is the usual rendering of R M on the barbaric series in Reinhart (Reinhart 22–26). Most doubtful are Nos. 48–51. The Ravenna issues (Nos. 52–86), on the other hand, are more homogeneous and the only dubious specimens are Nos. 77–78. Irregular as many of the above seem, however, they compare favorably with those which are certainly imitations as seen in Reinhart and in this catalogue, Nos. 88–97.

<sup>20</sup> *Moneta Mediolanensis*, p. 239 and pl. X, 90 α–η.

## HONORIA

*Obv.*: DN IVST CRAT HONO-  
RIA PF AVC  
Bust of empress r., diadem-  
ed.

*Rev.*: BONO REIPVBLICAE  
Victory standing l., holding  
long cross in r. hand.

\*  
R | V  
COMOB

*Ravenna*

87. known through literature only. 224e. Cohen 1  
NNA 1944, 81, no. 1

IMITATIONS OF VALENTINIAN III<sup>21</sup>

B2 b3  $\frac{R | M}{COMOB}$

88. 4.35 ↓ worn. 203

PLATE XIII

B2 b3  $\frac{R | V}{COMOB}$

- 89.<sup>22</sup> 4.31 ↓ pierced over wreath; worn. 137b  
*obv.*: DNPIAVALIENTI NIANVSPFAVC

PLATE XIII

- 90.<sup>23</sup> 4.38 ↓ fine. 99  
*obv.*: . in r. field

PLATE XIII

91. 4.37 ↓ pierced; worn. 55b

PLATE XIII

*obv.*: . in l. field; DNPIAVALIENTI ITANVSTF[ ]

<sup>21</sup> Much use has been made of Reinhart's study of the Visigothic coinage for these attributions of the imitations of Valentinian and most of the coins listed below have counterparts in Reinhart. With one or two exceptions (Reinhart 27-28 are certainly official issues of Milan) his series on Valentinian is undoubtedly barbaric but it is not certain that they all are Visigothic. The imitations in this catalogue and in Reinhart are predominantly of Ravenna issues.

<sup>22</sup> A wreath in the obverse legend break identifies this coin as a Visigothic (?) imitation; cf. Reinhart 10.

<sup>23</sup> A pellet in the obverse field is found on Reinhart 17-20 which are of similar style to this coin. It also appears on Nos. 39 (considered official), 91, 92 and 96 in this catalogue. With the exception of No. 39 all the coins bearing such a pellet are of a definite barbaric character.

92. 4.41 ↑ pierced but refilled; very worn. 205 PLATE XIII  
*obv.*: . in l. field
93. 5.57 ↓ with loop and border; very worn. 194 PLATE XXII  
*obv.*: DNΛVΛNITI NIANVS[ ]ΛVC
94. 4.42 ↓ fine. 76 PLATE XIV  
*obv.*: DΔVALEIITI IIIANVSPFC
- 95.<sup>24</sup> 4.42 ↓ good. 115 PLATE XIV  
*obv.*: wreath in legend break
- 96.<sup>25</sup> 4.37 ↘ fine. 184 PLATE XIV  
*obv.*: . in l. field; DNPIA VAIENTIHIANVSPFAVC
- 97.<sup>26</sup> 4.45 ↓ very worn. 207 PLATE XIV

## MAJORIAN

*Obverse legends**Reverse legends*

A DNIVLIVSMAIORI ANVSPFAVC a VICTORI AAVCCC  
 B DNIVLIVSMAIORIA NVSPEAVC

*Obverse types**Reverse types*

1 Bust of emperor r., helmeted, diademed, draped and cuirassed; holding lance and shield inscribed ✠.

1 Emperor in military dress, standing facing, holding long cross in r. hand and Victory on globe in l.; r. foot on serpent with human head.

*Arelate*

A1 a1  $\frac{A | R}{COMOB}$  Cohen 1

98. 4.42 ↓ fair. 135 PLATE III  
 99. 4.45 ↓ pierced; fair. 176 PLATE III  
*rev.*: COMOB\* in ex.

<sup>24</sup> Has "Visigothic" wreath; cf. Reinhart 10.

<sup>25</sup> Same coin as Reinhart 50.

<sup>26</sup> Similar to Reinhart 8 which, however, has a wreath in the obverse legend break.

100. 4.32 ↓ fair. 99 PLATE III  
*obv.*: . in upper and lower l. field  
*rev.*: COMOB\* in ex.

*Milan*

A1 a1  $\frac{M | D}{COMOB}$  Cohen 1

101. 4.30 ↑ worn. 40b. Ulrich-Bansa 102  
 102. 4.44 ↓ good. 48. Ulrich-Bansa 102 PLATE III  
 103. 4.42 ↑ worn. 205. Ulrich-Bansa not PLATE III  
*obv.*: legend break, ... A – NVSPFAVC

B1 a1  $\frac{M | D}{COMOB}$  Cohen 1 var.

104. 4.18 ↓ worn. 86. Ulrich-Bansa 104<sup>27</sup> PLATE XXIV  
*rev.*: legend break, ... A – AVCCC  
 105. 4.44 ↑ pierced (?); very worn. 137b. Ulrich-Bansa 104  
*rev.*: legend break, ... A – AVCCC  
 106. 4.20 ↑ very worn. 128a. Ulrich-Bansa 104 PLATE III  
*rev.*: legend break, ... A – AVCCC  
 107. 4.42 ↑ fair. 80a. Ulrich-Bansa not PLATE XXIV  
*obv.*: legend break, ... I – ANVSPEAVC  
*rev.*: legend break, ... A – AVCCC

*Ravenna*

A1 a1  $\frac{R | V}{COMOB}$  Cohen 1

108. 4.87 ↓ with loop; worn. 194 PLATE XXII  
*obv.*: legend break, ... R – IANVSPFAVC  
*rev.*: legend break, ... A – AVCCC  
 109. 4.35 ↓ fair. 99  
 110. 4.44 ↓ fine. 62 PLATE III  
 111. 4.38 ↓ worn. 137b PLATE III  
 112. 4.36 ↑ worn. 102 PLATE III  
*obv.*: . in r. field; legend break, ... O – RIANVSPFAVC  
 113. 4.46 ↑ fair. 99 PLATE III  
*obv.*: DNIVLIVSMEIORI...

<sup>27</sup> Ulrich-Bansa 104; text (p. 265) reads PFAVC but the plate clearly shows PEAVC.

The coins of Majorian present an assortment of crude portraits and legend varieties; one rarely finds a clean striking or a well-cut die. Such workmanship has come to be characteristic of western mints in the fifth century, however, and only one coin can be clearly recognized as an imitation.

A uniformity of style is evident on the coins of Arelate and on those of Milan. The coins of the latter occasionally have PE in place of PF in the obverse legend and all resemble Reinhart 62 but in this case Reinhart's attribution to a barbaric mint is incorrect.<sup>28</sup> Less uniformity is apparent on the coins of Ravenna but there is little reason for considering any one of them an imitation.

### IMITATIONS OF MAJORIAN<sup>29</sup>

A<sub>I</sub> a<sub>I</sub>  $\frac{R \mid A}{COMOB}$  Cohen 1

114. 4.37 ↓ good. 99

*obv.*: DNIVIVSMAIRI ANVSPFAVC

‡ on shield

PLATE XIV

### LIBIUS SEVERUS

#### *Obverse legends*

A DNLIBVSSEV ERVSPEAVC  
B DNLIBVSSEVER VSPERPET-  
VAC  
C DNLIBVSSEVE RVSPFAVC

#### *Reverse legends*

a VICTORI AAVCCC

<sup>28</sup> Reinhart 62 is clearly part of the official Milan issues of Majorian illustrated in Ulrich-Bansa, pl. XI, 102–104.

<sup>29</sup> Ulrich-Bansa (p. 263) considers the R A striking in the name of Majorian the product of an unknown mint which operated as a subsidiary mint of Ravenna, Milan or Arelate, most probably of Milan. These issues are also known for Valentinian III (Reinhart 51) and Libius Severus (in this catalogue, Nos. 146–148) of whom they are more common. The coins reveal a consistent style and are often from well cut dies, but they contain epigraphical irregularities. They are also similar to many others in Reinhart's series which are certainly barbaric. In addition, Philip Grierson tells me that this series is consistently debased.

*Obverse types**Reverse types*

- |  |   |
|--|---|
| 1 Bust of emperor r., diademed,<br>draped and cuirassed. | 1 Emperor in military dress,<br>standing facing, holding long<br>cross in r. hand and Victory on<br>globe in l.; r. foot on serpent<br>with human head. |
|--|---|

*Milan*

All Milan coins have reverse legend break, . . . A – AVCCC

A1 a1  $\frac{M | D}{COMOB}$  Cohen 11

- |  |                       |
|--|-----------------------|
| 115. 4.44 ↑ worn. 99. Ulrich-Bansa 108<br>116. 4.45 ↑ fair. 170a. Ulrich-Bansa 108<br>117. 4.10 ↑ fair. 63. Ulrich-Bansa 109 | PLATE III<br>PLATE IV |
| <i>obv.</i> : legend break, . . . E – RVSPEAVC   |                       |

B1 a1  $\frac{M | D}{COMOB}$  Cohen 10

- |  |                       |
|--|-----------------------|
| 118. 4.43 ↑ worn. 212. Ulrich-Bansa 112<br>119. 4.30 ↑ worn. 212. Ulrich-Bansa 114 | PLATE IV<br>PLATE III |
| <i>obv.</i> : DNLIRIVSSEVERV SPERPETVA <sup>Λ</sup>                                |                       |
| 120. 4.23 ↑ worn. 89. Ulrich-Bansa 114   |                       |
| <i>obv.</i> : DNLIRIVSSEVERV SPERPETVA <sup>Λ</sup>                                |                       |

*Rome*

C1 a1  $\frac{R | M}{COMOB}$  Cohen 8

- |   |                                     |
|---|-------------------------------------|
| 121. 4.42 ↓ pierced; fair. 115<br>122. 4.42 ↓ good. 110c<br>123. 4.49 ↓ fair. 40a | PLATE XIX<br>PLATE XIX<br>PLATE XIX |
| <i>rev.</i> : COMOB* in ex.   |                                     |
| 124. 4.34 ↓ fine. 40c<br>125. 4.45 ↓ fine. 80a<br>126. 4.44 ↓ fine. 115           |                                     |

2\*

127.	4.44	↓	fine. 115	PLATE XIX
128.	4.42	↑	very worn. 96b <i>rev.</i> : COMOB* in ex.	
129.	4.10	↓	worn. 212	
130.	4.32	↑	fair. 216 <i>obv.</i> : . in upper l. field	
131.	4.44	↑	good. 119	
132.	4.45	↓	fine. 99 <i>rev.</i> : COMOB* in ex.	PLATE IV
133.	4.39	↑	fair. 90b	
134.	4.17	↓	good. 101	
135.	4.44	↓	fine. 115	PLATE IV
136.	7.80	↓	with loop and border; very worn. 190 <i>rev.</i> : COMOB* in ex.	PLATE XXI

*Ravenna*

Usual obverse legend break, . . . E – VERVSPFAVC

CI aI  $\frac{R | V}{COMOB}$  Cohen 8

137. <sup>30</sup>	4.38	↑	good. 115 <i>obv.</i> : legend break, . . . E – RVSPFAVC	PLATE IV
138.	4.37	↓	good. 96a	PLATE XIX
139.	4.34	↓	worn. 70b	PLATE XIX
140.	4.38	↓	good. 60	PLATE XIX
141. <sup>31</sup>	3.82	↓	fair. 118a	PLATE XIX
142.	4.06	↓	worn. 135	
143.	4.42	↓	good. 41 <i>obv.</i> : legend break, . . . V – ERVSPFAVC	PLATE IV
144.	4.42	↓	good. 108a <i>obv.</i> : legend break, . . . V – ERVSPFAVC	
145.			known through literature only. 219 <i>NNA</i> 1944, 48, no. 7	

<sup>30</sup> The obverse legend break is the same as that of the Rome coins; see page 21.

<sup>31</sup> Underweight due to clipping; in other respects it is regular and is die-linked with Nos. 138–140.

The coins of Libius Severus are generally crude but within a mint group there is a uniformity of style. Portraiture in the Milan series (Nos. 115–120) is coarse but identical in style to the coins of Majorian from that mint. The use of PE in place of PF is carried over from the reign of Majorian and a new legend is also introduced, DN . . . PERPETV AVC, which continues into the reign of Anthemius. Rome and Ravenna do not make use of either of these variants except occasionally under Anthemius. All die positions for Milan coins are ↑ which remain consistent for the duration of the imperial control of that mint.<sup>32</sup>

The Rome coins (Nos. 121–136) are more numerous and present a homogeneous style. It is quite distinctive and in technique superior to the products of the Milan mint. The normal die position is ↓ but exceptions are noted on Nos. 128, 130, 131 and 133 all of which are of the Rome style but cruder than the other pieces.

The Ravenna coins (Nos. 137–145) present still another style which, with one exception, is uniform. Of particular interest is No. 137 which is clearly of the style of Rome. The obverse portrait is identical to those on Nos. 121–136 and the reverse has stylistic elements in common with the Rome group.<sup>33</sup> The Ravenna mint mark is puzzling, however, and perhaps indicates that a die-cutter was transferred from Rome to Ravenna. Because of the similarities of the reverse also it cannot represent merely a transferred die.<sup>34</sup> The normal die-position for Ravenna is ↓.<sup>35</sup>

<sup>32</sup> This observation, to my knowledge, has not been made previously and it is important for the attribution of unmarked specimens to that mint (see under Romulus Augustus and Basiliscus). Nos. 617–618 of Zeno, attributed to the imperial mint of Milan, also have die positions of ↑.

<sup>33</sup> The portraits and the treatment of the cuirass, diadem tails and lettering are practically identical. On the reverse, similarities with the Rome coins are evident in the lettering, the angle of the right arm and right thigh and in other details. The legend break of this coin (No. 137) is also the same as that of the Rome coins.

<sup>34</sup> An obverse die of Galla Placidia was transferred from Rome to Aquileia (J. Lafaurie, "Le trésor de Chécy (Loiret)," in J. Gricourt, G. Fabre and M. Mainjonet, J. Lafaurie, *Trésors monétaires et plaques-boucles de la Gaule romaine: Bavai, Montbuoy, Chécy*, XII<sup>e</sup> supplément à "Gallia" (Paris, 1958), p. 293 and J. P. C. Kent, "Gold Coinage in the Late Roman Empire," in *Essays in Roman Coinage Presented to Harold Mattingly*, eds. R. A. G. Carson and C. H. V. Sutherland (Oxford, 1956), p. 200n. Kent also points out a Rome reverse die of Valentinian III which was recut for use at Ravenna.

<sup>35</sup> The only exception is No. 137.



IMITATIONS OF LIBIUS SEVERUS<sup>36</sup>

C <sub>I</sub> a <sub>I</sub>	$\frac{R}{COMOB}$	$\frac{A}{COMOB}$

- |      |   |           |
|------|---|-----------|
| 146. | 4.36 ↓ good. 183                            | PLATE XIV |
|      | <i>rev.</i> : VICTOR AAVCCC                 |           |
| 147. | 7.68 ↘ with loop and border; very worn. 188 | PLATE XXI |
|      | <i>obv.</i> : DNIIBIVSSEVI RVSPFAVC         |           |
| 148. | 4.32 ↓ good. 6                              | PLATE XIV |
|      | <i>obv.</i> : DNIIBIVSSEVE RVSPFAVC         |           |

## ANTHEMIUS

*Obverse legends*

A DNANTHEMI VSPERPETA VC  
 B DNANTHE MIVSPFA VC  
 C DNANTHEM IVSPEA VC  
 D DNPROCANTH EMIVSPFA VC

*Reverse legends*

a SALVS REIPVBLICAE  
 (Legend break varies and is noted below.)

*Obverse types*

- 1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.
- 2 Bust of emperor, three-quarters facing, helmeted, diademed, draped and cuirassed; holding lance in r. hand.
- 3 Bust of emperor r., diademed, draped and cuirassed.

*Reverse types*

- 1 Two figures in military dress, standing facing, each with lance and holding globus cruciger between them.
- 2 Two figures in military dress, standing facing; figure on r. holding Victory on globe; between them above  $\frac{+}{BAS}$
- 3 Two figures draped and wearing nimbus, standing facing, holding long cross between them; each with globe in l. hand.

<sup>36</sup> Ulrich-Bansa (p. 272, nn. 42 and 45) is not convinced that these coins are imitations; see above p. 18, n. 29.

## Milan

A1 a1  $\frac{MD}{COMOB}$  Cohen 9

149. 4.46 ↑ fair. 205. Ulrich-Bansa 121  
rev.: 1 – PV – B

150. 4.42 ↑ pierced; fair. 90b. Ulrich-Bansa 121  
rev.: 1 – PV – B

151. 4.39 ↑ worn. 149. Ulrich-Bansa 123  
rev.: 2ΛLV2REI PV BLICAE

PLATE V

152. 4.40 ↑ worn. 203. Ulrich-Bansa 122  
rev.: 1 – PV – B; MD

PLATE V

B1 a2  $\frac{M | D}{COMOB}$  Cohen 12 var.

153. 4.24 ↑ fair. 36. Ulrich-Bansa 126  
obv.: legend break, 1 – VSPFAVC  
rev.: 1 – PV – B

PLATE V

C2 a1  $\frac{MD}{COMOB}$  Cohen 6

154. 4.36 ↑ good. 99. Ulrich-Bansa 118  
rev.: E – IP – V

155. 4.38 ↑ worn. 121c. Ulrich-Bansa not  
obv.: legend break, E – MIVSPEAVC  
rev.: E – IP – V

PLATE V

156.<sup>37</sup> known through literature only. 219  
NNA 1944, 48, no. 8

<sup>37</sup> The description of this coin in Breitenstein's article is that of the type B2 a1 which differs from C2 a1 in the use of PFAVC instead of PEAVC in the obverse legend. The coin was not available to Breitenstein, however (NNA 1944, 52, n. 49), and presumably the description was obtained from records. The reading of the legend is therefore open to question and the only other recording of this variant for Milan is found in Ulrich-Bansa, no. 116, who quotes the Zeccone hoard published by C. Brambilla (*Altre annotazioni numismatiche*, Pavia, 1870). This latter publication does not illustrate the coin and the type remains without authority. It seems possible that in both instances the obverse legend is a misreading and should be PEAVC. One of the photographs of the Zeccone coins in the Pavia Museum in my possession is of the type of Ulrich-

## Rome

A1 a1  $\frac{RM}{COMOB}$  Cohen not

157. 4.42 ↓ good. 99 PLATE V  
*rev.*: I – PV – B

C1 a1  $\frac{RM}{COMOB}$  Cohen 7 var.

158. 4.39 ↓ pierced; good. 100b PLATE V  
*rev.*: E – IPV – B

B2 a1  $\frac{RM}{COMOB}$  Cohen 6

159. 4.35 ↓ good. 52 PLATE V  
*rev.*: R – EIP – V; \* beneath *RM*; •COMOB•

160. 4.44 ↓ fair. 113c PLATE V  
*rev.*: R – EIP – V; •• encircling *RM*; •COMOB•

161. 4.30 ↓ very worn. 35a  
*rev.*: R – EIP – V

162. 4.43 ↓ pierced; very worn. 19c  
*rev.*: R – EIP – V

B1 a1  $\frac{*}{COMOB}$  Cohen 7  
 or CORMOB (noted)

163. 4.39 ↓ good. 86 PLATE XXIV  
*rev.*: R – EIP – V

164. 4.52 ↓ very fine. 224a PLATE V  
*rev.*: E – IPV – B; CORMOB

165. 4.49 ↓ fine. 72  
*rev.*: R – EIP – V; CORMOB

## Ravenna

B2 a1  $\frac{*RV}{COMOB}$  Cohen 8

Bansa 116 and with the same legend break, but reads PEAVC. The same variety is found in No. 155 of this catalogue. At any rate, the type C2 a1 with obverse legend break E – MIVSPEAVC does exist although it is not recorded by Ulrich-Bansa and Ulrich-Bansa 116 is possibly a misreading of this type.

166.<sup>38</sup> 4.37 ↓ worn. 51a  
rev.: R – EIP – V

PLATE V

D1 a3  $\frac{RV}{COMOB}$  Cohen 2

167. 4.37 ↓ worn. 137b  
obv.: DNPROCAN THEMIVSPFAVC  
rev.: SALVSRI PV BLICAE

PLATE V

D3 a3  $\frac{RV}{COMOB}$  Cohen 3

168. 4.30 ↓ fair. 135  
rev.: I – P – V – B

169. 4.43 ↓ very fine. 99  
rev.: I – P – V – B

PLATE V

*Mint* (?)

B1 a1

170. known through literature only. 224e. Cohen 7  
NNA 1944, 81, no. 2 has Cohen 6 but description  
reads “with shield” and is therefore type B1 a1 and  
Cohen 7

B2 a1

171. known through literature only. 215b. Cohen 6  
NNA 1944, 63, no. 2

Under Anthemius the facing portrait appears on the western coinage and the traditional reverse with the emperor standing with his foot on a serpent and the legend, VICTORIA AVCCC,<sup>39</sup> is replaced by new types with the legend SALVS REIPUBLICAE. The many variants and combinations of the types and legends make this coinage difficult to arrange and for almost every coin additional notes are required to indicate the legend break, the form of the mint mark, and the like.

<sup>38</sup> Similar to Reinhart 100.

<sup>39</sup> The only record of such a reverse for Anthemius known to me is Cohen 18; the legend, DN PROC ANTHIMIVS, suggests that it is barbaric.

The Milan coins (Nos. 149–156) are typical of that mint in that they are the crudest of the lot. Die positions are consistently ↑ for Milan and ↓ for Rome and Ravenna. Nos. 163–165 without the usual form of mint mark are certainly of Rome. In style they are identical to Nos. 157–162 and also, two of the coins bear CORMOB in the exergue. One Ravenna coin, No. 166, has a particularly crude portrait and may not be an official issue.

## GLYCERIUS

*Obverse legends*

A DNCLVCER IVSFPAVC

*Reverse legends*

a VICTORI AAVCC

*Obverse types*

1 Bust of emperor r., diademed, draped and cuirassed.

*Reverse types*

1 Emperor in military dress, standing facing, holding long cross in r. hand and Victory on globe in l.; r. foot on stool.

*Milan*A1 a1  $\frac{M | D}{COMOB}$  Cohen 2; Ulrich-Bansa 130

172. 4.41 ↑ good. 72

PLATE VI

*Ravenna*A1 a1  $\frac{R | V}{COMOB}$  Cohen 3

173. 4.44 ↓ pierced; good. 90b

PLATE XXV

174. 4.47 ↓ pierced; worn. 212

PLATE VI

The coinage of Glycerius reverts to earlier types, current before Anthemius, but with some variations. The three coins in this catalogue portray the emperor standing facing and holding a long cross and a Victory on globe but his right foot rests on a stool rather than

on a serpent.<sup>40</sup> Also, the obverse legend reads **FPAVC** (rather than **PFAVC**) and the reverse legend differs from previous issues in dropping the third **C** in **AVCCC**.<sup>41</sup>

## JULIUS NEPOS

*Obverse legends*

A DNIVLNE POSPFAVC

*Reverse legends*

a VICTORI AAVCCC:

*Obverse types*

- 1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Reverse types*

- 1 Victory standing l., holding long cross in r. hand.

*Milan*

A1 a1  $\frac{M \mid D}{\cdot \text{COMOB} \cdot}$  Cohen 5

175. 4.37 ↑ pierced but refilled; worn. 137b. Ulrich-Bansa 151  
 PLATE VI  
 176. 4.40 ↑ fair. 85. Ulrich-Bansa 151  
 PLATE XXIV  
 177. 4.40 ↑ good. 6. Ulrich-Bansa 151  
 PLATE VI  
 178. 4.42 ↑ good. 22. Ulrich-Bansa 149  
 PLATE VI  
*rev.*: ...AAVCCC and COMOB without pellets

*Rome (?)*

A1 a1  $\frac{\mid *}{\text{COMOB}}$  Cohen 5

<sup>40</sup> This is a variation of the type introduced by Valentinian III. Another type issued by Glycerius is similar to coins of Honorius which show the emperor standing right, holding a standard and a Victory on globe, with his left foot on a captive. The Glycerius type has a long cross in place of a standard and the emperor rests his foot on a stool rather than on a captive (Cohen 1). See Ulrich-Bansa, pp. 290–91 for a discussion of these changes and also, Lafaurie, “Chécy,” 282, n. 11.

<sup>41</sup> Glycerius reverts to the earlier custom of following the epigraphical rule of abbreviation: **AVCC** stands for two augusti on the throne, **AVCCC** for three augusti and so on. Coins of Glycerius with three G’s are also known and the issues are dated by Lafaurie in “Chécy,” 289.

179. 4.43 ↓ worn. 219

PLATE VI

*obv.*: DNIVLINE POSPFAVC

180. 4.40 ↓ fair. 79

*rev.*: ...AAVCCC without pellets*Ravenna*A1 a1  $\frac{R | V}{COMOB}$  Cohen 6

181. ↓ fair. 182d

182. 4.26 ↓ worn. 19b

PLATE VI

The standing Victory reverse with the legend VICTORIA AVCCC was the standard reverse type of the eastern coinage from the reign of Marcian. It now appears in the West on the coins of Julius Nepos and Romulus Augustus along with a facing portrait noted earlier in the West on the coins of Anthemius.

The Milan coins of Julius Nepos represent a distinct improvement over the Milan coins of preceding emperors.<sup>42</sup> The stylistic differences between the various mint groups, however, are not as apparent as they were previously. Nos. 179–180, without mint mark other than the exergue inscription of COMOB, have been attributed to Rome on the somewhat tenuous grounds that this mint was still in operation and because they are not entirely analogous with either the Milan or Ravenna specimens.

## IMITATIONS OF JULIUS NEPOS

*Obv.*: DNIVLIVD NEPVSIVC*Rev.*: CALVSR EIPV BLICAE

Bust of emperor, three-quarters facing, helmeted, diademed, draped and cuirassed; holding lance in r. hand.

Two figures in military dress, standing facing, each with lance and holding globus cruciger between them.

 $\frac{RV}{COMOB}$ 

183. 4.28 ↓ pierced; very worn. 192

PLATE XIV

<sup>42</sup> In fact, the portraiture resembles that on the Rome issues of Anthemius. It is of interest also that the Milan coins of Julius Nepos have pellets before and after COMOB which are evident on some of the Rome issues of Anthemius (Nos. 159–160).

*Obv.*: DNIYINE POSPFAVC

obverse type 1

184. 1.62 with loop and border; fine. 186  
struck on one side only.

PLATE XIV

Nos. 183–184 are unquestionably barbaric. The first one bears obverse and reverse types characteristic of Anthemius but a legend of Julius Nepos which has many irregularities. This is most unusual. It was noted earlier that an imitation could bear the obverse of one emperor and the reverse of another but here the obverse portrait is clearly copied from coins of Anthemius while the legend reads Julius Nepos. No. 184 is of bracteate form, struck on one side only and the impression can be seen from the reverse. Its weight is very low, 1.62 grams.

# ROMULUS AUGUSTUS

*Obverse legends*

*Reverse legends*

A DNROMVLVSA CVSTVSPFAVC a VICTORI AAVCCC:

*Obverse types*

*Reverse types*

1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

1 Victory standing l., holding long cross in r. hand.

*Milan (?)*

A1 a1  $\frac{|}{\cdot\text{COMOB}\cdot}$  \* Cohen 5

185. 4.44 ↑ very fine. 84

186. 4.42 ↑ pierced; fair. 16

187. 4.43 ↑ very fine. 99

188. 4.44 ↑ fair. 85

*rev.*: COMOB without pellets

PLATE VI

PLATE XXV  
PLATE XXIV



The four coins of Romulus Augustus are without mint mark but are closest in style to the Milan coins of Julius Nepos.<sup>43</sup> Other parallels with Milan issues are in the use of pellets before and after **COMOB**<sup>44</sup> and in the die positions which have been consistently ↑ since the reign of Libius Severus. Furthermore, the obverse legend on all four coins (3 from the same die, however) reads **ACVSTVS**, whereas coins of Romulus with a Rome mint mark have the conventional spelling **AVCVSTVS**.

### ARCADIUS

#### *Obverse legends*

A DNARCADI VSPFAVC

#### *Reverse legends*

a CONCORDI AAVCCC

b VICTORI AAVCCC

#### *Obverse types*

1 Bust of emperor r., diademed, draped and cuirassed.

#### *Reverse types*

- 1 Constantinople seated facing, head r., holding sceptre in r. hand and shield in l. inscribed **VOT V MVL X** in four lines.  
2 Emperor in military dress, standing r., holding standard in r. hand and Victory on globe in l.; l. foot on captive.

#### *Constantinople*

A1 a1  $\frac{\text{CONOB}}{\text{CONOB}}$  Sabatier 12 (lacks off. below); Tolstoi 22; *RIC* 70c  
189. off. Δ 4.42 ↓ good. 7

#### *Milan*

A1 b2  $\frac{\text{M} \mid \text{D}}{\text{COMOB}}$  Sabatier 18; Tolstoi 29  
190. 4.32 ↑ pierced; good. 73. Ulrich-Bansa 51 PLATE I  
191. 4.40 ↓ worn. 137 b. Ulrich-Bansa 60 PLATE I

<sup>43</sup> Compare also with those of Zeno (Nos. 617–618) with mint mark and particularly with Basiliscus (No. 626), without mint mark (PLATE VI).

<sup>44</sup> See above, p. 28, n. 42.

*Rome*

A1 b2  $\frac{R \mid M}{COMOB}$  Sabatier not; Tolstoi not

192. 4.49 ↑ worn. 115

PLATE I

*Ravenna*

A1 b2  $\frac{R \mid V}{COMOB}$  Sabatier 18; Tolstoi 30

193. 4.44 ↓ fair. 99

PLATE I

## THEODOSIUS II

*Obverse legends*

A DNTHEODO SIVSPFAVC  
Av DNTHEODOSI VSPFAVC

*Reverse legends*

a CONCORDI AAVCC  
b CONCORDI AAVCCC  
c UIRTEX ERCROM<sup>45</sup>  
d VOTXX MVLTXXX  
e GLORORVI STERRAR  
f SALVSREI \*PVBLICAE  
g VOTXXX MVLTXXXX  
h IMPXXXXIICOS XVIIPP

*Obverse types*

1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Reverse types*

1 Constantinople seated facing, head r., holding sceptre in r. hand and Victory on globe in l.; r. foot on prow.  
2 Emperor in military dress, dragging captive by hair and carrying trophy over l. shoulder.

<sup>45</sup> The first letter of the legend is clearly a U and not a V; the latter always has a serif across the bottom.

- 3 Victory standing l., holding long cross in r. hand.
- 4 Emperor in military dress, standing facing, holding standard in r. hand and globus cruciger in l.
- 5 Theodosius seated facing on l.; to r., Valentinian standing; each holding mappa in r. hand and cross in l.
- 6 Theodosius and Valentinian seated facing, each wearing nimbus, holding mappa in r. hand and cross in l.
- 7 Constantinople seated l., holding globus cruciger in r. hand and sceptre in l.; shield to r.; l. foot on prow.

*Constantinople*

A1 a1  $\frac{*}{\text{CONOB}}$  Sabatier not; Tolstoi 1 ff.

194. off. A 4.45 ↓ fair. 86

195. off. S 4.39 ↓ fair. 126

PLATE VII

A1 b1  $\frac{*}{\text{CONOB}}$  Sabatier 2 (lacks off. below); Tolstoi not

196. off. — 4.38 ↓ worn. 115

197. off. Δ 4.45 ↓ fair. 137b

198. off. Z 4.46 ↓ pierced; very worn. 214b

PLATE VII

A1 c2  $\frac{*}{\text{CONOB}}$  Sabatier 12; Tolstoi 37

199. 4.39 ↓ fair. 115

200. 4.49 ↓ fair. 115

PLATE VII

Ar d3  $\frac{|}{\text{CONOB}}$  Sabatier 13 (lacks off. €, Θ below); Tolstoi 47f. (lacks off. Γ, €, S, H and Θ below)

201. off. — 4.44 ↑ fair. 137b  
 202. off. — 4.42 ↓ fair. 99  
 203. off. Γ 4.44 ↓ mut.; fair. 115  
 204. off. € 4.37 ↓ pierced; very worn. 203  
 205. off. S 4.45 ↓ worn. 219  
 206. off. H 4.44 ↓ pierced; worn. 137b  
 207. off. Θ 4.30 ↓ fair. 115

PLATE VII

Ar d3  $\frac{*|}{\text{CONOB}}$  Sabatier 13; Tolstoi 40ff.

208. off. S 4.42 ↓ good. 117a  
 209. off. H 4.46 ↓ worn. 205  
 210. off. I 4.57 ↑ with loop and border; very worn. 195

PLATE VII

PLATE XXI

Ar e4  $\frac{*|}{\text{CONOB}}$  Sabatier 3 (lacks off. below); Tolstoi 10ff. (lacks off. below)

211. off. S 4.28 ↑ worn. 137b

PLATE VIII

Ar f5  $\frac{|}{\text{CONOB}}$  Sabatier 8; Tolstoi 33 ff.

212. 4.08 ↓ pierced; good. 80a  
       *rev.*: ...\*PVB LICAE  
 213. 4.43 ↓ good. 137b  
       *rev.*: ...\*PVB LICAE  
 214. 4.41 ↓ good. 115  
       *rev.*: ...\*PVB LICAE  
 215. 4.51 ↓ pierced; fair. 61

PLATE VIII

Ar f6  $\frac{|}{\text{CONOB}}$  Sabatier not; Tolstoi 25 ff. (lacks off. A below)

216. off. A 4.45 ↓ fair. 99  
 217. off. B 4.47 ↓ fine. 99  
 218. off. B 4.16 ↓ very worn. 183  
 219. off. H 4.41 ↓ worn. 203

PLATE VIII

A<sub>I</sub> g7  $\frac{*}{\text{CONOB}}$  Sabatier 14 (lacks off. A, S, H, I below); Tolstoi  
49ff. (lacks off. — below)

## Officina —

220. 4.45 ↓ pierced; fair. 99

221. 4.43 ↓ fair. 205

PLATE VIII

## Officina A

222. 4.47 ↓ good. 99

223. 4.47 ↓ fair. 115

224. 4.48 ↓ fair. 115

## Officina B

225. 4.44 ↓ fair. 205

226. 4.44 ↓ fair. 6

## Officina Γ

227. 4.51 ↓ fine. 114a

228. 4.45 ↓ worn. 219

229. 4.45 ↓ worn. 212

230. 4.22 ↓ fair. 38

231. 4.22 ↓ worn. 46a

232. 4.35 ↓ mut.; fair. 137b

233. 4.44 ↓ fair. 99

234. 4.41 ↓ worn. 57

## Officina Δ

235. 4.41 ↓ worn. 137b

236. 4.41 ↓ worn. 137b

237. 4.37 ↓ fair. 99

238. 4.44 ↓ worn. 132

239. 4.45 ↓ worn. 164d

240. 4.44 ↓ worn. 99

241. 4.41 ↓ mut.; pierced but refilled; very worn. 70c

PLATE XXIII

242. 4.34 ↓ worn. 6

## Officina E

243.<sup>46</sup> 4.40 ↓ worn. 179c

PLATE VIII

*obv.*: legend break ...SI – VSPFAVC

<sup>46</sup> Nos. 243 and 248 have an obverse legend break, SI – VSPFAVC which is normally found only on the *Imp* 42 issue; in addition, No. 248 has epigraphical irregularities. Possibly both are imitations.

- 244. 4.45 ↓ very worn. 87
- 245. 4.35 ↓ pierced; very worn. 212
- 246. 4.30 ↓ worn. 46b
- 247. 4.34 ↓ pierced; very worn. 18

Officina S

- 248.<sup>47</sup> 4.45 ↓ very worn. 219  
*obv.*: DNTEODOSI – VSPFAVC
- 249. 4.42 ↓ worn. 137b
- 250. 4.50 ↓ pierced; mut.; very worn. 179c
- 251. 4.43 ↓ worn. 137b
- 252. 4.44 ↓ mut.; worn. 6

PLATE VIII

Officina Z

- 253. 4.46 ↓ fair. 99
- 254. 4.42 ↓ fair. 86

Officina H

- 255. 4.37 ↓ very worn. 130b
- 256. 4.36 ↓ worn. 220
- 257. 4.40 ↓ worn. 33
- 258. 4.22 ↓ mut.; worn. 212
- 259. 4.37 ↓ pierced; fine. 68

Officina Θ

- 260. 4.44 ↓ mut.; fair. 58
- 261. 4.45 ↓ fair. 112
- 262. 5.35 ↓ with loop; very worn. 28

Officina I

- 263. 4.43 ↓ worn. 99
- 264. 4.46 ↓ worn. 203
- 265. 4.44 ↓ worn. 197
- 266. 4.45 ↓ mut.; worn. 212
- 267. 4.37 ↓ pierced; fair. 18

Avr h7  $\frac{*}{\text{CONOB}}$  Sabatier 6; Tolstoi not

- 268. 4.46 ↓ pierced; fair. 86
- 269. 4.38 ↓ pierced but refilled; good. 121f
- 270. 4.47 ↓ fair. 115

PLATE VIII

<sup>47</sup> See above, p. 34, n. 46.

271.	4.36 ↓	pierced; worn. 18	PLATE XX
272.	4.45 ↓	fine. 99	PLATE XX
273.	4.45 ↓	worn. 137b	
274.	5.76 ↓	border and space for loop; worn. 198	PLATE XXI
275.	4.30 ↓	pierced; very worn. 212	
276.	4.45 ↓	good. 99	
277.	4.41 ↓	fair. 99	
278.	4.40 ↓	fair. 99	
279.	4.35 ↓	worn. 6	
280.	4.41 ↓	worn. 6	
281.	4.36 ↓	worn. 6	
282.		known through literature only. 215b <i>NNA</i> 1944, 64, no. 3	

*Thessalonica*

A1	a1	$\frac{*}{\text{TES.OB.}}$	Sabatier not; Tolstoi not	
283.	4.25	↑	pierced; very worn. 62	PLATE VII
A1	e4	$\frac{*}{\text{TESOB}}$	Sabatier 3; Tolstoi 16	
284.	4.44	↓	worn. 219	PLATE VIII
285.	4.35	↓	pierced but refilled (?); fair. 99	
286.	4.26	↓	fair. 99	
287.	4.40	↓	worn. 99	
288.			known through literature only. 215b	
			<i>NNA</i> 1944, 64, no. 4	

*West COMOB*

A1	g7	$\frac{*}{\text{COMOB}}$	Sabatier not; Tolstoi not	
289.	off. Γ	4.34 ↓	worn. 212	
290.	off. €	4.43 ↓	pierced; fair. 54	PLATE VIII
291.	off. H	4.40 ↓	pierced; worn. 44	
292.	off. I	4.42 ↓	worn. 46b	

Avr h7  $\frac{*}{\text{COMOB}}$  Sabatier 6f. (lacks off. Δ, € below); Tolstoi 18ff.

- |      |        |                                     |            |
|------|--------|-------------------------------------|------------|
| 293. | 4.40 ↓ | pierced; very worn. 212             |            |
| 294. | 4.42 ↓ | fair. 47b                           |            |
| 295. | 4.34 ↓ | worn. 137b                          |            |
| 296. | 4.46 ↓ | worn. 62                            | PLATE XX   |
| 297. | 5.88 ↓ | with loop and border; very worn. 14 | PLATE XXI  |
| 298. | 4.39 ↓ | pierced; very worn. 5               |            |
| 299. | 4.48 ↓ | good. 99                            | PLATE VIII |
| 300. | 4.48 ↓ | fine. 114c                          |            |
| 301. | 4.44 ↓ | worn. 219                           |            |
| 302. |        | known through literature only. 219  |            |
|      |        | <i>NNA</i> 1944, 48, no. 12         |            |
| 303. |        | known through literature only. 219  |            |
|      |        | <i>NNA</i> 1944, 48, no. 13         |            |
| 304. |        | known through literature only. 219  |            |
|      |        | <i>NNA</i> 1944, 48, no. 14         |            |
| 305. |        | known through literature only. 203  |            |
|      |        | <i>NNA</i> 1944, 59, no. 4          |            |

Nos. 306–331 bear abbreviation marks in the legends; usually ...*P•F•AVC* and *IMP.XXXXII•COS XVII•P•P•* but not all stops are visible on all the coins.

- |      |        |  |             |
|------|--------|--|-------------|
| 306. | 4.47 ↓ | very fine. 65  |             |
| 307. | 4.39 ↓ | mut.; very worn. 220                                     | PLATE XXIII |
| 308. | 4.46 ↓ | fair. 99   |             |
| 309. | 4.32 ↓ | good. 5  |             |
| 310. | 4.14 ↓ | mut.; worn. 215a   |             |
| 311. | 4.43 ↓ | worn. 205  |             |
| 312. | 4.41 ↓ | very worn. 147   |             |
| 313. | 4.46 ↓ | worn. 205  |             |
| 314. | 4.42 ↓ | pierced; worn. 86  |             |
| 315. | 4.52 ↓ | worn. 109b   |             |
| 316. | 4.43 ↓ | mut.; worn. 156a   |             |
| 317. | 6.79 ↓ | with loop and border; pierced but refilled; very worn. 2 | PLATE XXI   |



318.	4.24 ↓	worn. 153c	
319.	4.37 ↓	good. 99	
320.	4.50 ↓	very worn. 205	
321.	4.42 ↓	worn. 212	
322.	4.28 ↓	pierced; very worn. 15	
323.	4.45 ↓	pierced; worn. 72	
324.	5.86 ↓	with loop and border; very worn. 23	PLATE XXI
325.	4.39 ↓	pierced but refilled (?); worn. 6	
326.	4.34 ↓	worn. 6	
327.	4.36 ↓	worn. 6	
328.	4.44 ↓	worn. 6	
329.	off. Δ 4.35 ↓	pierced; worn. 86	PLATE VIII
330.	off. Δ 4.48 ↓	worn. 112	PLATE XX
331.	off. € 4.40 ↓	worn. 179a	PLATE VIII

Ten separate issues of Theodosius are represented in the Scandinavian finds and most of these are datable. The issue represented by Nos. 194–195 and 283 with **CONCORDIA AVCC** is dated from ca. 408–ca. 420<sup>48</sup> and **CONCORDIA AVCCC**, appearing on Nos. 196–198, from 402–408.<sup>49</sup> **UIRT EXERC ROM**, on Nos. 199–200, to my knowledge has not been dated.<sup>50</sup> **VOT XX MVL T XXX** with a standing Victory is found in two varieties, one without star in field dated to 422<sup>51</sup> (Nos. 201–207) and a series with star in field (Nos. 208–210 and 332–335) dated 423–424 for Theodosius but 423–430 for the empresses.<sup>52</sup> In 424, **CLOR ORVIS TERRAR** was struck at Constantinople and Thessalonica for Theodosius (see Nos. 211 and 284–288).<sup>53</sup> **SALVS REIPVBLICAE** appears with two reverse types, the earlier series with Valentinian III as Caesar standing next to Theodosius, struck before October 23, 425 (Nos. 212–215) and the later series with Valentinian as Augustus seated beside Theodosius, struck from 425–430 (Nos.

<sup>48</sup> J. P. C. Kent, "Gold Coinage in the Late Roman Empire," 203; Lafaurie, "Chécy," 286 (dated 408–423). Nos. 1–2 and 4 of Honorius are parallel issues.

<sup>49</sup> Lafaurie, "Chécy," 286. No. 3 of Honorius is a parallel issue.

<sup>50</sup> This issue perhaps belongs to the period of Theodosius' sole reign between the death of Honorius in 423 and the accession of Valentinian in 425.

<sup>51</sup> J. P. C. Kent, "'Auream Monetam...Cum Signo Crucis'," *NC* 1960, 130. Issued also in the names of Honorius and Pulcheria.

<sup>52</sup> *Ibid.*

<sup>53</sup> *Ibid.*

216–219).<sup>54</sup> The great majority of the coins, however, are of two issues: VOT XXX MVL T XXXX beginning ca. 430<sup>55</sup> and IMP XXXXII COS XVII in 443.<sup>56</sup> Both were issued with CONOB and COMOB in the exergue. In the Scandinavian finds there are 48 CONOB and 4 COMOB coins of the *Vot 30* issue and 15 CONOB and 39 COMOB coins of the *Imp 42* issue.<sup>57</sup>

The COMOB exergue inscription is usually interpreted as western and does appear on all issues of western mints often accompanied by a mint mark of M D, R M and the like. The CONOB and COMOB series of these two issues are very similar in style, however, and Boyce has suggested that both series were minted in Constantinople but that the COMOB series was intended for the West.<sup>58</sup>

### EUDOCIA

*Obv.*: AELEVDO CIAAVC

Bust of empress r., diadem-  
ed, crowned and draped.

*Rev.*: VOTXX MVL TXXX

Victory standing l., hold-  
ing long cross in r. hand.

\* |  
—  
CONOB

<sup>54</sup> Ibid. The latter issue also for Valentinian.

<sup>55</sup> Issued also for Eudocia, Pulcheria, Valentinian (Cat. No. 29) and Eudoxia (NC 1959, 16); see No. 532 of Leo which also has this reverse.

<sup>56</sup> A. A. Boyce, op. cit., 131–41. Issued also for Eudocia, Eudoxia, Pulcheria, Placidia and Valentinian III (Cat. No. 31).

<sup>57</sup> Boyce states that the COMOB series is the more common for both issues (ibid., 139). In checking sales catalogues for these issues, however, I found that the great majority of legible photographs were CONOB for the *Vot 30* issue but COMOB for the *Imp 42* issue.

<sup>58</sup> Ibid. But cf. Kent, "Gold Coinage in the Late Roman Empire," 202–3 who has noted solidi of unusual style in the *Imp 42* issue marked COMOB which he attributes to a traveling mint in Asia Minor. However, the solidi in the Scandinavian finds (except for those classified as imitations), in general are of a homogeneous style, but one or two distinctions in the *Imp 42* issue are apparent: in the COMOB series there often are abbreviation marks at appropriate places in the legend (see Nos. 306–331). On Nos. 293–301, also COMOB coins, these marks are not apparent and they are not used consistently within each legend even on Nos. 306–331, but they never appear on a CONOB coin. Moreover, the reverse legend on CONOB coins extends into the area of the shield and the shield is rounder and about half complete, sometimes less. No comparable distinctions are apparent on the *Vot 30* issue.

*Constantinople* Sabatier 1 (lacks off. below); Tolstoi 88ff. (lacks off. — below)

332. off. — 4.46 ↓ fine. 115

PLATE VII

333. off. Z 4.39 ↓ pierced; worn. 62

### PULCHERIA

*Obv.*: AELPVLCH ERIA AVC

Bust of empress r., diademed, crowned and draped.

*Rev.*: VOTXX MVL TXXX

Victory standing l., holding long cross in r. hand.

\* |  
—  
CONOB

*Constantinople* Sabatier not; Tolstoi 35 (lacks off. below)

334. off. Δ 4.38 ↓ pierced; good. 87

PLATE VII

### GALLA PLACIDIA

*Obv.*: DNGALLAPLA CIDIAPFAVC

Bust of empress r., diademed, crowned and draped; cross on r. shoulder.

*Rev.*: VOTXX MVL TXXX

Victory standing l., holding long cross in r. hand.

\* | V  
R |  
—  
COMOB

*Ravenna* Cohen 13

335. 4.38 ↓ fair. 99

PLATE VII

### IMITATIONS OF THEODOSIUS II

*Obv.*: (DN THEODOSIVS PF AVC)

Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Rev.*: (VICTORIA AVCCC)

Victory standing l., holding long cross in r. hand.

336. 4.42 ↓ fair. 182e  
*obv.*: DITHEODO SIVSPFAVC  
*rev.*: VICTORI ΛΛVCCC  
 PLATE XIV  
 | \*  
 CONOB
337. 4.55 ↓ fair. 205  
*obv.*: NTHEODO SIVSPFAVC  
*rev.*: VICTORI AAVCCCI  
 PLATE XIV  
 | \*  
 CONOB
338. 4.40 ↓ fair. 6  
*obv.*: IITHEODO SIVSPFAVC  
*rev.*: VICTORI ΛΛVCCGB  
 PLATE XIV  
 | \*  
 BONOC
339. 4.51 ↓ fair. 99  
*obv.*: OITHEODOI VSPFAVC  
*rev.*: VICTOPI AAVCCCA  
 PLATE XV  
 | \*  
 CONOC
340. 4.33 ↓ pierced; worn. 122  
*obv.*: ΛCHTNVODO [ ] (retrograde)  
 image reversed  
*rev.*: [ ]VSDD TTDDSSS+++  
 PLATE XV  
 | \*  
 [ ]

*Obv.*: As above

*Rev.*: (VOT XXX MVLT XXXX)

Constantinople seated l.,  
 holding globus cruciger in  
 r. hand and sceptre in l.;  
 shield to r.; l. foot on prow.

341. 4.46 ↓ fair. 137b  
*obv.*: same die as above  
*rev.*: VOTXXX HVLTXXXI  
 PLATE XV  
 | \*  
 COHOO
342. 4.40 ↓ pierced; worn. 137b  
 same dies as above  
 PLATE XV
343. 4.53 ↑ fair. 204  
*obv.*: OHTHEODOZI VSPFAV  
*rev.*: OTXXX HVLXXXX  
 PLATE XV  
 | \*  
 COHOB
344. 4.38 ↓ good. 98  
*obv.*: DNTNEODO 29E2VAC  
*rev.*: VOTXXX HVLTXXXX  
 PLATE XV  
 \* |  
 CONOB
345. 4.42 ↓ worn. 90c  
*obv.*: DIITHEODOZ VAPFAVC  
*rev.*: VOTXXX NVLTXXXXX  
 PLATE XV  
 | \*  
 COHOB

*Obv.*: As above

*Rev.*: (IMP XXXXII COS XVII)  
Constantinople seated l. as  
above.

346.	4.49 ↓ fine. 99	<i>obv.</i> : ONTHEODOI VN $\Psi$ AVC <i>rev.</i> : INPXXXXII COS XVII $\cdot$ P $\cdot$ P	PLATE XV *   CONOO
347.	4.46 ↓ good. 99	<i>obv.</i> : DHTNEODOI [ ]AVC <i>rev.</i> : IN $\Psi$ XXXXII CO $\Sigma$ XVIIPPO	PLATE XV *   CONOB
348.	4.42 ↓ worn. 212	<i>obv.</i> : DNTHNEODO SIVSPF $\Delta$ VC <i>rev.</i> : I IIPXXXXII CO $\Sigma$ XVIIPP	PLATE XV *   COHOB
349.	4.44 ↓ fine. 117b	<i>obv.</i> : DNTHEODO VSPEV $\Delta$ C <i>rev.</i> : IIXXXXCOS XVIIPP	PLATE XV *   CONOB
350.	4.45 ↓ fair. 218	<i>obv.</i> : DNTHEODO SIVSPF $\Delta$ VC <i>rev.</i> : IMPXXXXIICOS $\cdot$ XVII $\cdot$ P $\cdot$ P $\cdot$	PLATE XV *   COMOB

Of particular interest among the imitations are Nos. 336–339 with a standing Victory and the legend VICTORIA AVCCC. This type was introduced by Marcian and we have here another example of a hybrid imitation, combining the obverse of one emperor and the reverse of another later emperor, which in this instance must be at least as late as the reign of Marcian. This same practice was noted on imitations of Honorius and, in a more complex form, of Julius Nepos.

With the exception of No. 340 the remaining imitations are of the most common types for Theodosius. Nos. 341–345 are of the *Vot* 30 issue and Nos. 346–350,<sup>59</sup> the *Imp* 42 issue. Die-linked by the obverse to Nos. 341–342 is No. 340 which has a standing Victory reverse and a completely confused legend.<sup>60</sup> The repetition of G's and T's suggests that VICTORIA AVCCC was intended, in which case this group also, Nos. 340–342, would postdate Theodosius (see section on identical dies, p. 122).

<sup>59</sup> No. 346 from the Aby hoard is similar to No. 339 with a Victory reverse, from the same find; possibly this coin also post-dates Theodosius.

<sup>60</sup> The obverse legend of Nos. 340–342 is obscure but the presence of ...ODO suggests Theodosius. See under Honorius, page 9, n. 12.

## MARCIAN

*Obverse legends*

A DNARCIA NVSPFAVC

*Reverse legends*

a VICTORI AAVCCC

b CLORORVI STERRAR

*Obverse types*

1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Reverse types*

1 Victory standing l., holding long cross in r. hand.  
2 Emperor in military dress, standing facing, holding standard in r. hand and globus cruciger in l.

*Constantinople*

A1 a1  $\frac{\quad}{\text{CONOB}}$  \* Sabatier 4 (lacks off. —, A, Γ below); Tolstoi 2 ff. (lacks off. — below)

*Officina —*

351. 4.50 ↓ very fine. 114b  
obv.: ...NVS\*P\*FAVC

352. 4.37 ↓ fair. 137b  
obv.: DNNARCIA NVS\*P\*F\*AVC

PLATE IX

*Officina A*

353. 4.42 ↓ worn. 113d  
354. 4.38 ↓ worn. 122  
355. 4.47 ↓ pierced; good. 99  
356. 4.42 ↓ worn. 6

*Officina B*

357. 4.30 ↓ fair. 18  
358. 4.39 ↓ fair. 115

*Officina Γ*

359. 4.45 ↓ good. 100a

*Officina Δ*

360. 4.45 ↓ fair. 99  
361. 4.46 ↓ fair. 47a  
obv.: DNNARCIA...

## Officina €

362. 4.44 ↓ good. 86

## Officina S

363. 4.44 ↓ fair. 80a

364. 4.44 ↓ worn. 212

365. 4.43 ↓ worn. 45

366.<sup>61</sup> 4.43 ↓ very fine. 110c

367. 4.44 ↓ 183

## Officina Z

368. 4.40 ↓ very worn. 122

*rev.*: COHOB in ex.

369. 4.19 ↓ fair. 193

370. 4.37 ↓ fair. 137b  
off. Σ?

## Officina H

371. 4.48 ↓ mut.; fair. 115

372. 4.40 ↓ worn. 137b

373. 4.39 ↓ worn. 137b

374. 4.40 ↓ mut.; worn. 6

## Thessalonica

A1 b2  $\frac{*}{\text{TESOB}}$  Sabatier 3; Tolstoi 1

375. 4.39 ↓ worn. 99

376. 4.37 ↓ worn. 99

PLATE IX

The standing Victory with legend VICTORIA AVCCG was introduced by Marcian at the beginning of his reign. It remained the standard type with no changes through the reign of Zeno but under Anastasius, Justin I and Justinian I certain modifications were made.

## IMITATIONS OF MARCIAN

A1 a1  $\frac{*}{\text{CONOB}}$ 

377. 4.30 ↓ good. 124

PLATE XVI

<sup>61</sup> Of strange style but probably regular.

LEO I

*Obverse legends*

A DNLEOPE RPETAVC  
B DNLEOPE RPETVAVC  
C DNLEOPERPE TVVSAVC

*Reverse legends*

a VICTORI AAVCCC  
b SALVSREI \*PVBLICAE  
c VOTXXX MVLTXXXX

*Obverse types*

- 1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.
- 2 Bust of emperor l., diademed and in consular dress; holding mappa in r. hand and cross in l.
- 3 Bust of emperor r., diademed, draped and cuirassed.

*Reverse types*

- 1 Victory standing l., holding long cross in r. hand.
- 2 Two figures seated facing, each wearing nimbus; cross between heads.
- 3 Emperor in consular dress, seated facing, holding mappa in r. hand and cross in l.
- 4 Constantinople seated l., holding globus cruciger in r. hand and sceptre in l.; shield to r.; l. foot on prow.
- 5 Emperor in military dress, standing facing, holding long cross in r. hand and Victory on globe in l.; r. foot on serpent with human head.

*Constantinople*

A $\Gamma$  a $\Gamma$ 

	*
CONOB	

 Sabatier 4 (lacks off. A,  $\Gamma$ , S and H below); Tolstoi 3 ff.

*Officina A*

378. 4.47 ↓ fine. 99  
379. 4.50 ↓ very fine. 99  
380. 4.30 ↓ worn. 99

PLATE XXV



381. 4.46 ↓ fair. 165  
 382. 4.45 ↓ mut.; worn. 137b  
 383. 4.22 ↓ mut.; fair. 137b  
 384. 4.46 ↓ pierced; worn. 99  
 385. 4.43 ↓ good. 30  
 386. 4.44 ↓ very worn. 27  
 387. 4.47 ↓ good. 99  
 388. 4.44 ↓ fair. 115  
 389. 4.43 ↓ fair. 99  
 390. 4.45 ↓ worn. 219  
 391. 4.46 ↓ worn. 6  
 392. known through literature only. 218  
*NNA* 1944, 69, no. 28.2  
 393. known through literature only. 224e  
*NNA* 1944, 81, no. 3

## Officina B

394. 3.39 ↓ fair. 32  
*rev.*: COHOB in ex.  
 395. 4.35 ↓ worn. 137b  
 396. 4.48 ↓ mut.; worn. 212  
 397. 4.42 ↓ worn. 182h  
 398. 4.35 ↓ pierced but refilled; worn. 137b PLATE XXIII  
 399. 4.30 ↓ worn. 137b  
 400. 4.32 ↓ worn. 4  
 401. 4.42 ↓ mut.; worn. 137b  
 402. 4.47 ↓ fine. 115  
 403. 4.45 ↓ 183  
 404. 4.47 ↓ fair. 212  
 405. 4.00 ↓ pierced; worn. 3  
 406. 4.45 ↓ pierced; fair. 55a  
 407. 4.47 ↓ fair. 99  
 408. 4.49 ↓ very fine. 99 PLATE XXV  
 409. 4.50 ↓ very fine. 99 PLATE XXV  
 410. 4.48 ↓ fine. 99 PLATE XXV

## Officina Γ

411. 4.45 ↓ pierced; very worn. 121g  
 412. 4.45 ↓ worn. 205

413. 4.47 ↓ worn. 203  
 414. 4.39 ↓ mut.; worn. 193 PLATE XXIII  
 415. 4.25 ↓ pierced; very worn. 175c  
 416. 4.46 ↓ fair. 99  
 417. 4.45 ↓ mut.; worn. 137b  
 418. 4.39 ↓ worn. 147  
 419. 4.46 ↓ worn. 99  
 420. 4.31 ↓ very fine. 99 PLATE XXV  
 421. 4.46 ↓ fair. 6  
 422. 4.49 ↓ fair. 90b PLATE XX  
       *rev.*: IVCTORI...; CNOB in ex.  
 423. 4.49 ↓ pierced; very fine. 113b PLATE XX  
       *rev.*: IVCTORI...; CNOB in ex.  
 424. 4.42 ↓ worn. 80b  
 425. known through literature only. 219  
       *NNA* 1944, 49, no. 19  
 426. known through literature only. 219  
       *NNA* 1944, 49, no. 20
- Officina Δ
427. 4.40 ↓ fine. 164a PLATE IX  
       *rev.*: VICTRI...  
 428. 4.58 ↓ fair. 218 PLATE IX  
       *rev.*: VICTRI...  
 429. 4.45 ↓ worn. 99 PLATE XX  
 430. 4.26 ↓ worn. 137b  
 431. 4.47 ↓ mut.; worn. 212  
 432. 4.25 ↓ fair. 92d  
 433. 4.46 ↓ mut.; fair. 115  
 434. 4.48 ↓ fair. 90b  
 435. 4.46 ↓ good. 99  
 436.<sup>62</sup> 4.39 ↓ pierced; worn. 83  
 437. 4.43 ↓ pierced; good. 18  
 438. 4.25 ↓ fair. 6  
 439. 4.47 ↓ pierced; fair. 115

<sup>62</sup> No. 436 is pierced over the officina which is identified as off. I in the archives; however, it is of the same reverse die as one of the Midlum coins which is off. Δ (A. N. Zadoks-Josephus Jitta, "Midlum (Fr.) 1925," *JMP* 47, 1960, 94-96).

440. known through literature only. 196  
*NNA* 1946, 26, no. 40

## Officina €

441. 4.22 ↓ very fine. 99 PLATE XXV  
 442. 4.38 ↓ fine. 99 PLATE XXV  
 443. 4.40 ↓ fine. 99 PLATE XXV  
 444. 4.43 ↓ worn. 99  
 445. 4.33 ↓ worn. 137b  
 446. 4.47 ↓ good. 110b  
 447. 4.36 ↓ fair. 92a  
       *rev.*: COHOB in ex.  
 448. 4.39 ↓ with loop; fair. 194 PLATE XXII  
       •• on helmet  
 449. 4.43 ↓ worn. 182i  
 450. 4.46 ↓ very fine. 99  
 451. 4.45 ↓ fair. 93b  
 452. 4.43 ↓ worn. 42  
 453. 4.39 ↓ pierced; worn. 169  
 454. 4.48 ↓ worn. 88a  
 455. 4.41 ↓ worn. 202  
 456. 4.40 ↓ pierced but refilled; fair. 137b PLATE XXIII  
 457. 4.47 ↓ worn. 211  
 458. 4.53 ↓ with loop and border; very worn. 194 PLATE XXII

## Officina S

459. 4.37 ↓ fair. 135  
 460. 5.65 ↓ with border and traces of loop; worn. 187  
 461. 4.44 ↓ mut.; fair. 26  
 462. 4.48 ↓ mut.; pierced but refilled; worn. 67 PLATE XXIII  
 463. 4.39 ↓ fair. 81  
 464. 4.50 ↓ pierced; good. 78b PLATE XX  
 465. 4.42 ↓ worn. 212  
 466. 4.38 ↓ worn. 137b  
 467. 4.44 ↓ worn. 99  
 468. 4.37 ↓ good. 87  
 469. 4.45 ↓ fine. 49  
 470. 4.50 ↓ fine. 99  
 471. 4.46 ↓ pierced; good. 99

472. 4.47 ↓ good. 86  
 473. 4.44 ↓ fair. 182g  
 474. 4.44 ↓ pierced; worn. 137c  
 475. 4.48 ↓ fair. 99  
 476. 4.24 ↓ pierced; very worn. 104  
 477. 4.34 ↓ very worn. 6  
 478. 4.30 ↓ fair. 6
- Officina Z
479. 4.50 ↓ worn. 219  
 480. 4.44 ↓ very worn. 222  
 481. 4.44 ↓ worn. 168a  
 482. 4.45 ↓ worn. 6  
 483. 4.39 ↓ worn. 137b  
 off. Σ
- Officina H
484. 4.36 ↓ mut.; worn. 137b  
 485. 4.40 ↓ pierced; worn. 93a  
 486. 4.53 ↓ good. 193  
 rev.: CONOR in ex.  
 487. 4.37 ↓ very fine. 78a  
 rev.: CONOR in ex.  
 488. 4.40 ↓ mut.; worn. 137b  
 489. 4.40 ↓ pierced; fair. 18  
 490. 4.45 ↓ fair. 75  
 obv.: DNLEORE...  
 491. 4.42 ↓ good. 130b  
 492. 4.43 ↓ worn. 176  
 493. 4.86 ↓ with loop; worn. 193  
 494. 4.43 ↓ worn. 203  
 495. 4.46 ↓ worn. 87  
 496. 4.47 ↓ fine. 100c  
 497. 4.47 ↓ fair. 99  
 498. 4.40 ↓ good. 86  
 499. 4.48 ↓ fair. 87
- Officina Θ
500. 4.48 ↓ worn. 90b  
 501. 4.40 ↓ worn. 128b

PLATE XX

PLATE IX

PLATE IX

PLATE XXIII

PLATE XXII

PLATE XXIV

PLATE XXIV

;

502. 4.38 ↓ mut.; very worn. 130b PLATE XXIII  
 503. 4.43 ↓ worn. 137b  
 504. 4.18 ↓ fair. 99  
 505. 3.46 ↓ worn. 131  
 506. known through literature only. 219  
*NNA* 1944, 49, no. 22

*Officina I*

507. 4.26 ↓ worn. 156b  
 508. 4.40 ↓ pierced; worn. 148  
 509. 4.45 ↓ very worn. 130b  
 510. 4.45 ↓ mut.; worn. 137b  
 511. 4.45 ↓ fair. 42 PLATE XX  
 512. 4.33 ↓ worn. 147  
 513. 4.44 ↓ mut.; fair. 6  
 514. known through literature only. 203  
*NNA* 1944, 60, no. 12  
 515. known through literature only. 219  
*NNA* 1944, 49, no. 23

*Officina uncertain*

516. 4.48 ↓ worn. 137b  
 517. 4.36 ↓ pierced but refilled; very worn. 162a PLATE XXIII  
 518. 4.48 ↓ fair. 6  
 519. known through literature only. 224a  
*NNA* 1944, 68, no. 27  
 520. known through literature only. 200  
*NNA* 1946, 26, no. 41

A1 b2  $\frac{\text{CONOB}}{\text{CONOB}}$  Sabatier 3; Tolstoi 2

521. 4.47 ↓ fair. 203 PLATE IX  
*rev.*: SALVSREI \*RVBLICAEC

*Thessalonica*

A1 a1  $\frac{\text{THSOB}}{\text{THSOB}}^*$  Sabatier 4 (lacks off. — below); Tolstoi not

522. 4.44 ↓ worn. 86 PLATE XXIV  
 523. 4.40 ↓ worn. 212

524. 4.35 ↓ worn. 219 PLATE IX  
*obv.*: ...RPETVAVC

A1 a1  $\frac{* | *}{\text{THSOB}}$  Sabatier not; Tolstoi 14

525. 4.46 ↓ fair. 137b PLATE IX

526. 4.44 ↓ good. 86

527. 4.44 ↓ pierced; fair. 175b

528. 4.29 ↓ very worn. 218

529. 4.43 ↓ fair. 80a PLATE XXIV

530. 4.47 ↓ pierced; fair. 80a PLATE XXIV

A2 a3  $\frac{* |}{\text{THSOB}}$  Sabatier 5; Tolstoi 15

531. 5.22 ↓ with loop; fair. 152 PLATE XXII  
*obv.*: DNLEOPERPETAVC

*West* COMOB

A1 c4  $\frac{| *}{\text{COMOB}}$  Sabatier not; Tolstoi not

532. 4.36 ↓ very fine. 115 PLATE IX

*Milan*

A3 a5  $\frac{M | D}{\text{COMOB}}$  Sabatier 6; Tolstoi 43 (barbaric); Ulrich-Bansa 133 var.

533. 4.42 ↑ fair. 115 PLATE IV

B3 a5  $\frac{M | D}{\text{COMOB}}$  Sabatier 6; Tolstoi not; Ulrich-Bansa 131

534. 4.41 ↑ fair. 42 PLATE IV

*Rome*

C3 a5  $\frac{R | M}{\text{COMOB}}$  Sabatier 6; Tolstoi not

535. 4.46 ↓ good. 70a PLATE IV  
*rev.*: R N l. and r. in field

4.

## Ravenna

- B3 a5  $\frac{R}{COMOB} \mid \frac{V}{COMOB}$  Sabatier 6; Tolstoi 44 (barbaric)
536. 4.37 ↓ worn. 215a PLATE IV  
*obv.*: legend break ...PER – PETVAVC
537. 4.34 ↓ fair. 115 PLATE IV  
*obv.*: legend break ...PER – PETVAVC
- C3 a5  $\frac{R}{COMOB} \mid \frac{V}{COMOB}$  Sabatier 6; Tolstoi not
538. 4.40 ↓ worn. 219 PLATE IV  
*obv.*: legend break ...PER – PETVVSAVC

The great majority of Leo's coins have the standing Victory reverse and the legend VICTORIA AVCCC. Of the other types, especially rare is No. 532 with the legend VOT XXX MVLTT XXXX, which is a reverse of Theodosius.

Only two of the standing Victory series can be attributed to barbaric mints but there are a few official strikings with irregularities.<sup>63</sup> Nos. 422–423,<sup>64</sup> from the same pair of dies, read IVCTORI... with CNOB in the exergue and Nos. 427–428, sharing the same reverse die, read VICTRI... In both cases, however, the coins are similar to many others in the catalogue and these irregularities must be attributed to careless workmanship. On the other hand, No. 448, with a somewhat barbaric portrait and the unusual marks (••) on the helmet, is more doubtful. Of unusual style also are Nos. 486–487 from the same obverse die. The reverse dies are different but both have CONOR in the exergue and are of officina H. Possibly they are of a western mint for they do not seem barbaric although neither legends nor portraits are regular. The western coins from Milan, Rome and Ravenna (Nos. 533–538) correspond stylistically to the coins of Libius Severus from those mints and are undoubtedly contemporary official issues.<sup>65</sup>

<sup>63</sup> Nos. 394, 405 and 505 are underweight but otherwise regular; possibly they have been clipped.

<sup>64</sup> Portrait similar to Reinhart 108.

<sup>65</sup> A specimen similar to Nos. 533–534 was attributed to the Visigoths by Reinhart (Reinhart 107) and one similar to the Ravenna pieces, Nos. 536–538, to the Suevians by Keary (NC 1878, pl. I, 4).

IMITATIONS OF LEO I

AI AI  $\frac{|}{\text{CONOB}}$  \*

539. 4.48 ↓ fair. 91  
off. 2

PLATE XVI

540. 4.34 ↓ good. 204  
rev.: VICTO[ ] IVCCGI

PLATE XVI

Nos. 539 and 540 are clearly imitations but no similar pieces are known in the literature.

LEO II/ZENO

*Obverse legends*

A DNLEOETZ ENOPPAVC

*Reverse legends*

a SALVSREI\*PVBLICAE

*Obverse types*

1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Reverse types*

1 Two figures seated facing, each wearing nimbus; cross between heads.

*Constantinople*

AI AI  $\frac{|}{\text{CONOB}}$

Sabatier 1 (lacks off. Γ below); Tolstoi 1 ff. (lacks off. Γ below)

541. off. — 7.57 ↓ with loop and border; very worn. 188

PLATE XXI

542. off. — 4.47 ↓ fine. 56a

543. off. — 4.47 ↓ good. 99

PLATE XXV

544. off. Γ 4.43 ↓ worn. 182n

PLATE X

545. off. Θ 4.49 ↓ good. 43



## ZENO

*Obverse legends*

A DNZENO PERPAVC  
B DNZENOP ERPFAVC

*Reverse legends*

a VICTORI AAVCCC

*Obverse types*

1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Reverse types*

1 Victory standing l., holding long cross in r. hand.

*Constantinople*

A1 a1  $\frac{\text{CONOB}}{\text{CONOB}}$  \* Sabatier not<sup>66</sup>

## Officina A Tolstoi 11

546. 4.37 ↓ pierced; fair. 169

547. 4.40 ↓ fair. 9

548. 4.47 ↓ worn. 137b

PLATE X

## Officina B Tolstoi 13

549. 4.45 ↓ worn. 182l

550. 4.41 ↓ pierced; worn. 169

551. 4.50 ↓ worn. 219

PLATE XXXIII

552. 4.42 ↓ worn. 153a

553. known through literature only. 215b

*NNA* 1944, 64, no. 5

554. known through literature only. 215b

*NNA* 1944, 64, no. 6

## Officina Γ Tolstoi 14

555. 4.47 ↓ fair. 137b

PLATE X

556. 4.35 ↓ pierced; fair. 169

557. 4.49 ↓ fair. 182k

558. 4.42 ↓ fair. 212

PLATE XXXII

559. 4.37 ↓ fair. 168a

<sup>66</sup> The type described by Sabatier 1 includes an R in the left field or M D in the field which is not found on any of the Scandinavian specimens; otherwise his description would fit most of the varieties listed here.

560. 4.33 ↓ worn. 212 PLATE XXXII
561. 4.40 ↓ pierced; very worn. 13
562. 4.48 ↓ worn. 205 PLATE XXXIII  
*obv.: DNΣENO...*
563. 4.49 ↓ fair. 95
564. 4.33 ↓ mut.; worn. 6
- Officina Δ Tolstoi 16
565. worn. 219 PLATE XXXIII
566. 6.63 ↓ pierced but refilled; with loop and border; very worn. 2 PLATE XXI
567. 4.45 ↓ worn. 137b PLATE XX
568. 4.36 ↓ pierced; very worn. 137b PLATE X
- Officina S Tolstoi 18
569. 4.47 ↓ worn. 92b
570. 4.47 ↓ fair. 219 PLATE XXXIII
571. 4.46 ↓ worn. 205 PLATE XXXIII
572. 4.44 ↓ fair. 130b  
off. 2
- Officina Z Tolstoi 19
573. 4.45 ↓ pierced; very worn. 137b  
*rev.: CONOR in ex.*
574. 4.47 ↓ worn. 6 PLATE XX
575. 4.43 ↓ fair. 6 PLATE X
- Officina H Tolstoi 21
576. 4.41 ↓ worn. 219 PLATE XXXIII
577. 4.38 ↓ very worn. 137b
- Officina Θ Tolstoi 22
578. 4.40 ↓ mut.; fair. 137b  
*obv.: DNΣENO...*
579. 4.32 ↓ worn. 147
580. 4.49 ↓ very worn. 213 PLATE XXXII
581. 4.49 ↓ pierced; worn. 71
- Officina I Tolstoi 24
582. 4.36 ↓ worn. 122
583. 4.46 ↓ fair. 205 PLATE XXXIII
584. 4.51 ↓ good. 224d
585. 4.45 ↓ fair. 5

586. 4.42 ↓ fair. 212 PLATE XXXII  
*obv.*: DNΣENO...

587. 4.44 ↓ worn. 25

588. worn. 206

589. 4.44 ↓ pierced; fair. 6

590. 4.46 ↓ good. 6 PLATE X

591. known through literature only. 224e  
*NNA* 1944, 81, no. 4

*Officina uncertain*

592. 4.30 ↓ pierced but refilled; worn. 181 PLATE XXIII

*Constantinople (?)*

A1 a1  $\frac{|}{\text{CONOB}}$  \*

593. off. S 4.37 ↓ worn. 179a PLATE X

594. off. S 4.39 ↓ fair. 125 PLATE X

595. off. Λ 4.44 ↓ fair. 212 PLATE XXXII

*obv.*: DNZEIIO ΠΕΝΡΑΥΓ

*rev.*: CONO? in ex.

596. off. NS 4.40 ↓ worn. 166 PLATE X

597. off. α 4.38 ↓ very worn. 179a PLATE X

598. off. Σ 4.39 ↓ fair. 150 PLATE X

599. off. c 4.44 ↓ fair. 46b PLATE XXIV

*Thessalonica (?)*

A1 a1  $\frac{*|*}{\text{CONOB}}$  Sabatier not; Tolstoi 42 (barbaric)

600. 4.43 ↓ fair. 221

601. 4.38 ↓ fair. 6 PLATE X

602. known through literature only. 219  
*NNA* 1944, 50, no. 31

*West* COMOB

B1 a1  $\frac{|}{\text{COMOB}}$  \* Sabatier not

Officina  $\ddot{A}$  Tolstoi 12

- |      |                             |            |
|------|-----------------------------|------------|
| 603. | 4.39 ↓ fair. 66             | PLATE XVI  |
| 604. | 5.19 ↓ with loop; worn. 194 | PLATE XXII |
| 605. | 4.37 ↓ very worn. 162b      | PLATE XVI  |

Officina  $\Gamma$  Tolstoi 15; Ulrich-Bansa, pl. O, o

- |      |   |              |
|------|---|--------------|
| 606. | 4.35 ↓ worn. 137b<br><i>obv.</i> : DNSENO...                      | PLATE XVI    |
| 607. | 4.30 ↓ very worn. 151<br><i>obv.</i> : DNSENO...                  | PLATE XVI    |
| 608. | 4.42 ↓ worn. 205<br><i>obv.</i> : DNSENO...                       | PLATE XXXIII |
| 609. | 4.39 ↓ worn. 203<br><i>obv.</i> : DNSENO...                       | PLATE XXXII  |
| 610. | 4.45 ↓ good. 6<br><i>obv.</i> : DNSENO...                         | PLATE XVI    |
| 611. | 4.47 ↓ worn. 6<br><i>obv.</i> : DNSENO...                         | PLATE XVI    |
| 612. | known through literature only. 219<br><i>NNA</i> 1944, 50, no. 26 |              |

Officina  $\Delta$  Tolstoi not

- |      |   |           |
|------|---|-----------|
| 613. | 4.44 ↓ good. 113a<br><i>obv.</i> : DNZENOP ERP[FAVC]              | PLATE XVI |
| 614. | known through literature only. 203<br><i>NNA</i> 1944, 60, no. 14 |           |

Officina : Tolstoi 44 (barbaric); Ulrich-Bansa, pl. O, v

- |      |                           |             |
|------|---------------------------|-------------|
| 615. | 4.43 ↓ pierced; worn. 212 | PLATE XXXII |
|------|---------------------------|-------------|

A1 a1  $\frac{| *}{\text{COMOB}}$  Sabatier not; Tolstoi not

- |      |                                 |           |
|------|---------------------------------|-----------|
| 616. | 4.43 ↓ pierced; very worn. 182j | PLATE XVI |
|------|---------------------------------|-----------|

Milan

A1 a1  $\frac{M | D}{\text{COMOB}}$  Sabatier 1; Tolstoi 41 (barbaric)

- |      |   |          |
|------|---|----------|
| 617. | 4.42 ↑ fair. 175a. Ulrich-Bansa 156                                   | PLATE VI |
| 618. | 4.40 ↑ fine. 6. Ulrich-Bansa 156 var.<br><i>rev.</i> : •COMOB• in ex. | PLATE VI |

From Zeno's first reign (Autumn 474 to January 475) there are official eastern and official western issues and from his second reign (August 476 to April 491), official eastern issues along with western imitations of Odovacar. In this catalogue the coins have been designated as eastern or western with no attempt to distinguish between barbaric or official issues of the western series. The basis for the arrangement is primarily the form of the obverse legend: DN ZENO PERP AVC is the official eastern form but does occur on some coins of western origin also, while DN ZENO PERP F AVC is always western.

Nos. 546–592 with the legend DN ZENO PERP AVC are almost certainly the official series of Constantinople. Several styles of portraiture are apparent but this undoubtedly represents a development in portraiture during the seventeen years of Zeno's reign. That of No. 548, for example, typifies an early issue of Zeno and is comparable to the coins of Leo II/Zeno and Basiliscus. One group of coins (see No. 555) is obviously late for the portraiture is similar to certain issues of Anastasius. A transitional stage from the middle of Zeno's reign is illustrated by No. 568.<sup>67</sup>

Nos. 593–599 have been listed separately because of some irregular features but in style they are analogous to the middle and late issues of the above group.<sup>68</sup> However, they all bear unusual marks following the reverse legend. The marks are those assigned to Odovacar by Kraus<sup>69</sup> but, unfortunately, they are not illustrated. That they can be so similar in style to the first group and not be of the same origin is doubtful but it seemed best to list them separately.

The next three coins (Nos. 600–602) have the same legend as the above groups but are of a different style and in addition have two stars to left and right in the reverse field.<sup>70</sup> This was characteristic of

<sup>67</sup> The portrait of No. 575 is unlike any of these groups and, in fact, closely resembles a coin illustrated in Ulrich-Bansa (pl. XV, 162) which bears a mint mark of Milan. A vertical row of circles on the cuirass of No. 590 is also unusual. This feature is also evident on Ulrich-Bansa 162. Both coins are from the same hoard.

<sup>68</sup> The only exception is No. 595 which looks western. Characteristic of western issues in this period is a more conspicuous lock of hair by the left ear which is also noted on this coin.

<sup>69</sup> Kraus, *Die Münzen Odovacars*, No. 2 = Sabatier 1.

<sup>70</sup> No. 600 is from the same obverse die as a Polish find (Malchow) which has a reverse showing only one star.

Thessalonica earlier although the mint mark here is CONOB. Moreover, they are not unlike the Thessalonica coins of Leo and accordingly have been assigned to that mint.

Definitely western in origin are the remainder of Zeno's coins but whether or not they are official issues is not always certain. Nos. 603–615 are of a uniform style with the western form of obverse legend and COMOB in the exergue. Of this group, Nos. 606–612 with officina  $\Gamma$ <sup>71</sup> and No. 615 are of the series attributed to Odovacar by Ulrich-Bansa. Nos. 603–605 with officina  $\tilde{A}$  and No. 613, officina  $\Delta$ , are not in Ulrich-Bansa but they undoubtedly belong to this same series. Nos. 616–618 bear the eastern form of obverse legend but the western COMOB on the reverse. Of this group, Nos. 617–618 with a mint mark of Milan have close stylistic parallels with the Milan issues of Julius Nepos and must be official western issues of Zeno's first reign.<sup>72</sup>

# ARIADNE

*Obv.*: AELARI ADNEAVC

Bust of empress r., diademed, crowned and draped.

*Rev.*: VICTORI AAVCCC

Victory standing l., holding long cross in r. hand.

| \*  
—  
CONOB

*Constantinople* Sabatier 1 (lacks off. below); Tolstoi 70 (lacks off. below)

619. off. 1 4.36 ↓ worn. 182m

PLATE XI

# BASILISCUS

*Obverse legends*

A DN**B**ASILIS C**P**SPPAVC

B DN**B**ASILIS CVSPERTAVC

*Reverse legends*

a VICTORI AAVCCC

<sup>71</sup> Officina  $\Gamma$  is undoubtedly that on the coin in Ulrich-Bansa (pl. O, o and p. 335) which he reads as R and attributes to Rome.

<sup>72</sup> Compare with Nos. 185–188 (Romulus Augustus) and No. 626 (Basiliscus); all have a die position of ↑ and pellets before and after COMOB is the general rule (PLATE VI).

*Obverse types**Reverse types*

1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

1 Victory standing l., holding long cross in r. hand.

*Constantinople*

A1 a1  $\frac{|}{\text{CONOB}}^*$  Sabatier 1; Tolstoi 73 ff.

620. off. — 4.01 ↓ pierced; very worn. 8

621. off. — 4.42 ↓ fair. 6

622. off. — 4.38 ↓ good. 6

623. off. H 4.43 ↓ fine. 115

624. off. l 4.42 ↓ fair. 137b

PLATE XI

PLATE XXV

*Milan (?)*

B1 a1  $\frac{|}{\text{COMOB}}^*$  Sabatier 2; Tolstoi 83 (barbaric)

625. 4.40 ↑ worn. 219

*obv.*: ...CVSPRETA/C

*rev.*: ...AAVCCC:

626. 4.39 ↑ fine. 6

*rev.*: ...AAVCCC:

PLATE VI

PLATE VI

## BASILISCUS/MARCUS

*Obverse legends**Reverse legends*

A DNbASILISCI ETMARCPAVG

a VICTORI AAVCCC

b SALVSREI\*PVBLICAE

*Obverse types*

- 1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Reverse types*

- 1 Victory standing l., holding long cross in r. hand.  
2 Two figures seated facing, each wearing nimbus; cross between heads.

*Constantinople*

A1 a1  $\frac{| *}{\text{CONOB}}$  Sabatier 2 (lacks off. below); Tolstoi 89ff. (lacks off. below)

627. off. A 4.35 ↓ worn. 219

PLATE XI

A1 b2  $\frac{| *}{\text{CONOB}}$  Sabatier 1 (lacks off. below); Tolstoi 88 (lacks off. below)

628. off. I 4.41 ↓ mut.; worn. 154

PLATE XI

rev.: ...\*PVRILICAE

The eastern issues of Basiliscus and Basiliscus/Marcus present no particular problem. New letter forms are apparent on the issues emanating from Constantinople: **b** for **B** and **ϐ** for **V** which are used only for the emperor's name. The epigraphy is otherwise normal.<sup>73</sup> The two western issues of Basiliscus (Nos. 625–626) can be attributed to the mint of Milan with a reasonable degree of certainty. In the die position and the use of pellets before and after COMOB they follow the practice of that mint and in style they are very similar to the Milan issues of Julius Nepos and Zeno.<sup>74</sup> Furthermore, the portrait of No. 626 is identical to that of Romulus Augustus on Nos. 185–188 which were attributed to Milan for the same reasons.<sup>75</sup>

<sup>73</sup> **ϐ** for **V** also appears in the reverse legend on the coin of Leontius (No. 629).

<sup>74</sup> Compare with Nos. 175–178 (Julius Nepos) and Nos. 617–618 (Zeno) (PLATE VI).

<sup>75</sup> See above, p. 30.



LEONTIUS<sup>76</sup>*Obv.*: DNLEONT IOPERPSAVC

Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Rev.*: VICTORIA AAVCC<sup>77</sup>

Victory standing l., holding long cross in r. hand.

↓  
ANT

*Antioch* Sabatier 4; Tolstoi, p. 168

629. 4.45 ↓ worn. 212

PLATE XI

## ANASTASIUS

*Obverse legends*

A DNANASTA SIVSPPAVC

B DNANASTAS IVSPERPAVC

*Reverse legends*

a VICTORI AAVCCC

*Obverse types*

1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Reverse types*

1 Victory standing l., holding long cross in r. hand.

2 Victory standing l., holding  
✠ cross in r. hand.

<sup>76</sup> Leontius was a usurper in the East during the reign of Zeno and was associated with the revolt of Illus, Zeno's general and confidant who fell from favor about 481 and took up residence in the East. The patrician Leontius was sent to Antioch by Zeno to demand release of Verina, Zeno's mother-in-law, who was in the hands of Illus. Instead, he joined forces with Illus as did Verina a little later. Open rebellion ensued and in 484 Leontius was crowned emperor at Tarsus by Verina. Zeno commissioned Theodoric the Ostrogoth to put down the rebellion but then recalled him. The greater part of Theodoric's troops, however, continued on to Syria to join the Rugian forces commanded by Hermanaric, son of Aspar. Illus and Leontius were defeated in battle but fled to a fortress in Cherris where they were besieged for four years. They were betrayed in 488, the fortress was taken and Illus and Leontius put to death. The coins of this usurper are extremely rare and the significance of one of them among the Scandinavian finds is discussed on page 165.

<sup>77</sup> This form of V is also noted on issues of Basiliscus (Nos. 620-624) and Basiliscus/Marcus (Nos. 627-628).

- 2 Bust of emperor, three-quarters facing, helmeted and cuirassed; holding lance and shield which portrays emperor on horse.

*Constantinople*

A1 a1 CONOB | \* Sabatier not; *BMCB*yz. not; Tolstoi 70ff. (barbaric, lacks off. B, E, Z, H, Θ below)

Officina A

630. 4.53 ↓ pierced but refilled; worn. 122 PLATE XXIX  
631. 4.40 ↓ good. 180 PLATE XI

Officina B

632. 4.42 ↓ fair. 122 PLATE XXIX  
633. 4.41 ↓ worn. 137b PLATE XXVII

Officina Γ

634. 4.42 ↓ pierced; mut.; worn. 171  
635. 4.44 ↓ fair. 135 PLATE XXVI

Officina Δ

636. 4.48 ↓ fair. 135 PLATE XXVI  
637. 4.49 ↓ fair. 205 PLATE XXXIII  
638. 4.38 ↓ worn. 137b PLATE XXVII  
639. 6.30 ↓ pierced but refilled; with loop and border; very worn. 176 PLATE XXVI

Officina E

640. 4.20 ↓ worn. 146 PLATE XI  
641. 4.52 ↓ good. 6 PLATE XXXI

Officina S

642. 4.39 ↓ worn. 160

Officina Z

643. 4.32 ↓ worn. 142 PLATE XI

Officina H

644. 4.33 ↓ fair. 137a PLATE XI  
645. 4.44 ↓ fine. 137b PLATE XXVII  
646. 4.47 ↓ fair. 182q PLATE XI  
647. 4.46 ↓ mut.; fair. 6 PLATE XXXI

## Officina Θ

648. 4.34 ↓ very worn. 122 PLATE XXIX

649. 4.46 ↓ worn. 220 PLATE XXXII

## Officina I

650. 4.46 ↓ pierced; fair. 47c PLATE XI

651. 4.48 ↓ fair. 212 PLATE XXXII

652. 4.32 ↓ fair. 135 PLATE XXVI

653. 4.50 ↓ pierced; fine. 1820 PLATE XI

654. 4.34 ↓ fair. 135 PLATE XXVI

655. 5.31 ↓ with loop; good. 194 PLATE XXII

656. 4.38 ↓ worn. 21

657. 4.49 ↓ worn. 182p

658. 4.44 ↓ mut.; worn. 176 PLATE XXVI

659. 4.50 ↓ pierced; worn. 143

## Officina uncertain

660. 4.34 ↓ pierced twice; folded over; worn. 122  
PLATE XXIX

A2 a2  $\frac{*}{\text{CONOB}}$  Sabatier not; *BMCByz.* 2 ff. (lacks off. B, S, Z, Θ, I below); Tolstoi 2 ff. (lacks off. B, Z below)

## Officina B

661. 4.50 ↓ fine. 137b PLATE XXVII

662. 4.47 ↓ worn. 155 PLATE XII

## Officina Γ

663. 4.41 ↓ fair. 139 PLATE XII

## Officina €

664. 4.41 ↓ pierced; fair. 179a PLATE XXIX

665. 4.46 ↓ fair. 137b PLATE XXVII

## Officina S

666. 4.31 ↓ worn. 19b PLATE XII

667. 4.40 ↓ fair. 156a PLATE XXVI

## Officina Z

668. 4.48 ↓ worn. 137b PLATE XXVII

669. 4.34 ↓ fair. 156a PLATE XXVI

670. 4.39 ↓ worn. 122 PLATE XXX

## Officina H

671. 4.33 ↓ worn. 147 PLATE XXVI

Officina Θ

672. 4.37 ↓ worn. 167

PLATE XII

Officina I

673. 4.44 ↓ good. 137b

PLATE XXVII

674. good. 219

PLATE XXXIII

675. 4.37 ↓ fair. 137b

PLATE XXVII

*Thessalonica* (?)

BI AI  $\frac{* | *}{\text{CONOB}}$  Sabatier not; *BMCByz.* not; Tolstoi not

676. 4.43 ↓ worn. 137b

PLATE XXVII

The official issues of Anastasius are of two types, the earlier one having a diademed portrait similar to those of Zeno and a Victory on the reverse carrying a long cross. This series was not recognized as official by Wroth or Tolstoi but it is undoubtedly an imperial issue. It was superseded by the second issue in which the diadem is lacking and the cross held by Victory is of the  $\mathfrak{A}$  type.

Nos. 630–660 of Anastasius' first issue have been attributed to the imperial mint but not all with equal certainty. Much variance is noted in the treatment of details and in the portraiture which is not evident in the second issue. Since the barbaric issues are predominantly imitations of the first issue there is reason to be doubtful of some of the attributions.<sup>78</sup> No. 644 represents the usual form of cross and wings of Victory and also has a typical portrait which is similar to the portraiture of the second issue. Another style of portraiture is found on several specimens (cf. No. 650) which resembles one group of Zeno's coins<sup>79</sup> and represents the early issues of Anastasius. Unusual portraits which do not fit into either group and irregular renderings of the wings are found on several coins.<sup>80</sup> A particularly crude Vic-

<sup>78</sup> There is not a single specimen to my knowledge that reproduces the types of the second issue (portrait without diadem and Victory holding a  $\mathfrak{A}$  cross) and which is with certainty barbaric. Reinhart 120–121 and 124 are of this type but are certainly official issues. Reinhart 122–123 of the type of the first issue are also regular issues and not barbaric.

<sup>79</sup> See No. 555 (PLATE X).

<sup>80</sup> Unusual portraits are found on Nos. 637 and 655 and irregular renderings of the wings on Nos. 638, 640, 643, 648 and 655.

tory appears on Nos. 646 and 653. None of these coins can be attributed to barbaric mints with any degree of certainty, however, and much of the variance is probably due to stylistic development under Anastasius.

The second official issue of Anastasius reveals much greater uniformity of style. A minor variance in the treatment of the cuirass is evident but in all other respects the coins are regular and undoubtedly official issues.

No. 676 is an unknown issue of Anastasius. It differs from the above issues in the obverse legend break (S – IVS), the titulature (PERPAVC) and in the presence of two stars on the reverse. The use of PERPAVC in the obverse legend is found on solidi of Zeno and the reverse with two stars was also characteristic of the mint of Thessalonica. Three coins of Zeno,<sup>81</sup> also with two stars and a CONOB mint mark, were accordingly attributed to Thessalonica and this coin of Anastasius also must belong there.<sup>82</sup>

### IMITATIONS OF ANASTASIUS

#### *Obverse legends*

A DNANASTA SIVSPPAVC  
B DNANASTA SIVSPFAVC

#### *Reverse legends*

a VICTORI AAVCCC

#### *Obverse types*

1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

#### *Reverse types*

1 Victory standing l., holding long cross in r. hand.

<sup>81</sup> Nos. 600–602.

<sup>82</sup> It can be dated to the first year of Anastasius' reign; it corresponds to the dated marriage solidus of Anastasius (G. Zacos and A. Vegler, "An Unknown Solidus of Anastasios I," *Numismatic Circular* 1959, 154–55; "Marriage Solidi of the Fifth Century," *Numismatic Circular* 1960, 73–74) in the legend break and titulature. Another solidus of Anastasius (Tolstoi 78–80) has the usual

## OSTROGOTHIC

*Milan (?)*

AI ai  $\frac{|}{\text{CONOB}}$  \* Sabatier not; cf. *BMCVandals*, p. 59, nos. 83–84;  
Tolstoi not

677.<sup>83</sup> off. H 5.29 ↓ with loop; good. 194 PLATE XXII  
cross on helmet

678. off. Θ 4.42 ↓ very fine. 6 PLATE XXXI  
cross on helmet

*Rome*

BI ai

Officina A  $\frac{|}{\text{COMOB}}$  \* Sabatier not; *BMCVandals*, p. 55, no. 61;  
Tolstoi 82 f.

679. 4.44 ↓ good. 137 b PLATE XXVII

680. 4.43 ↓ fair. 123 PLATE XVII

681. 4.42 ↓ fair. 179 a PLATE XXIX

682. 4.43 ↓ fair. 173 PLATE XVII

683. 4.42 ↓ pierced; fair. 177 PLATE XVII

684. 4.31 ↓ fair. 178 PLATE XVII

685. 4.41 ↓ pierced; fair. 179 a PLATE XXIX

legend break and titlature (A – SIVSPPAVC) but two stars on the reverse. This coin perhaps represents a later issue from Thessalonica.

The legend break and titlature of our coin is known on several other specimens which have only one star on the reverse (Florange June 14, 1923, no. 44; May 12, 1926, no. 126 (COMOB) = Hess/Leu 24, Apr. 16, 1964, no. 397; Ratto 314; Naville Oct. 3, 1934, no. 2023; ANS-ETN). Some of the specimens are of unusual or barbaric style but one or two would seem to be regular and possibly represent the very earliest issue of Anastasius from Constantinople (earlier than the first official issue discussed above) which carried over the titlature of Zeno and which are contemporary with the marriage solidus of Anastasius and parallel the issue at Thessalonica represented by our coin, No. 676.

<sup>83</sup> No. 1083 from the Montagu Collection (Rollin and Feuardenet, Paris, 1896) is very similar to Nos. 677–678. It also has a cross on the helmet and is of off. Θ but has an irregularity in the reverse legend (VICTRI).

5\*

686.	4.45 ↓	good. 144	PLATE XVII
687.	4.43 ↓	very fine. 137b	PLATE XXVII
688.	4.33 ↓	worn. 122	PLATE XXX
689.	4.42 ↓	fair. 179a	PLATE XXIX
690.	4.43 ↓	good. 153b	PLATE XVII

Officina Θ  $\frac{M | *}{COMOB}$  Sabatier 2; *BMCVandals*, p. 55, no. 63;  
Tolstoi 87f.

691.	4.43 ↓	fair. 137b <i>obv.</i> : DIANASTA...	PLATE XXVIII
692.	4.43 ↓	pierced but refilled; very worn. 174	PLATE XXIII
693.	4.46 ↓	pierced but refilled; worn. 220	PLATE XXXII
694.	4.36 ↓	good. 135	PLATE XXVI
695.	4.42 ↓	fair. 137b	PLATE XXVIII
696.	4.37 ↓	fair. 6	PLATE XXXI
697.	4.46 ↓	fine. 6	PLATE XXXI
698.		known through literature only. 219 <i>NNA</i> 1944, 51, no. 36	

Officina replaced by ✱  $\frac{| *}{COMOB}$  Sabatier not; *BMCVandals*, p. 55, no. 62; Tolstoi 90

699.	4.42	worn. 182r	PLATE XVII
700.	4.40 ↓	worn. 185	PLATE XVII
701.	4.41 ↓	very fine. 6	PLATE XXXI
702.	4.52 ↓	very fine. 6	PLATE XXXI
703.	5.39 ↓	with loop; good. 194 <i>obv.</i> : DNANA2TA 2IVPRTIAC	PLATE XXII

### Ravenna

A1 a1  $\frac{| *}{CONOB}$  Sabatier not; *BMCVandals*, p. 46, no. 4; Tolstoi not

Officina replaced by ⚡

704.	4.47 ↓	fair. 137b	PLATE XXVIII
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Officina replaced by ⚡

705.	4.34 ↓	fine. 6	PLATE XXXI
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## BURGUNDIAN

A(or B)I aI  $\frac{\text{98} | *}{\text{CO} [ ] \text{OB}}$  Keary, pl. I, 7; Robert, pl. IV, 2; Tolstoi 95 f.

706. off. H 4.42 ↓ fair. 137b PLATE XXVIII  
*obv.*: DNANASTA SIVSPRAVC

## FRANKISH

(cf. Reinhart, Nos. 125–31; Robert, pl. IV)

A1 a1

Officina —  $\frac{| *}{\text{CONOB}}$

707. 4.35 ↓ worn. 145 PLATE XVII  
*obv.*: DNANAST ASIVSPIVC  
*rev.*: +IICTORI ΛΛVCCC

Officina A  $\frac{| *}{\text{COMOB}}$

708. 4.44 ↓ pierced; worn. 163 PLATE XVII  
 709. 4.43 ↓ fair. 134 PLATE XVII  
 710. 4.45 ↓ worn. 137b PLATE XXVIII  
*rev.*: •COMOB• in ex.  
 711. 4.46 ↓ fair. 158 PLATE XVII  
*rev.*: •COMOB• in ex.  
 712. 4.46 ↓ fair. 130b PLATE XXVI  
*rev.*: •COMOB• in ex.  
 713. 4.45 ↓ fair. 137b PLATE XXVIII  
 714. 4.40 ↓ very worn. 161 PLATE XVII  
*rev.*: COIIOB in ex.

Officina Θ  $\frac{[ ] | *}{\text{COMOB}}$

715. 4.32 ↓ worn. 158 PLATE XVII



## UNCERTAIN

A1 a1

716. <sup>84</sup>	4.40 ↓	worn. 137b <i>obv.</i> : DIIANASTA SIVSPPAVC □ in r. field <i>rev.</i> : VIXCTO- ΛΛVCCCG	PLATE XXVIII *   COIIOC
717.	4.45 ↓	pierced but refilled; clipped; very worn. 122 same dies as above	PLATE XXX
718.	4.39 ↓	good. 122 <i>obv.</i> : DNANASTA SIVSPPAVC <i>rev.</i> : VICTORI ΛΛVCCCGZ	PLATE XXX *   CONOB
719.	3.37 ↓	pierced; fair. 219 <i>obv.</i> : DNANASTA SIVSPPAVC <i>rev.</i> : VICTORI AAVCCCH	PLATE XXXIII *   CONOB
720.	4.24 ↓	very worn. 6 <i>obv.</i> : DNANASTA SIVSPPAVC <i>rev.</i> : VICTOR IAAVCCCGΘ	PLATE XXXI *   [ ]
721.	4.44 ↓	fair. 6 <i>obv.</i> : DNANAST ASIVSPPAV <i>rev.</i> : VICTOR IAAVCCC	PLATE XXXI *   COHO

Classed as Ostrogothic issues from the mint of Rome are Nos. 679–703. Within this group, Nos. 691–698 bear a mint mark of Rome in ligature and analogies of Nos. 691–698 with Nos. 679–690 and Nos. 699–703 identify the entire group as Rome issues. Characteristic of Nos. 691–698 are the rendering of the diadem tails which are curled, the form of the exergue mark in which the B is oversize and slightly diagonal, the Victory's wings which are formed by vertical lines, and the invariable use of . . . PFAVC and COMOB.<sup>85</sup> The other two groups share these elements and, in addition, the stance of the Victory on

<sup>84</sup> A solidus in the collection of the University of Texas at Austin would seem to be of the same dies as Nos. 716–717. It is described, but not illustrated, in Otto Heilborn, *Catalogue descriptif de la collection des monnaies antiques grecques, romaines et byzantines de feu Baron A. W. Stjernstedt* (Stockholm, 1882), no. 2270.

<sup>85</sup> The British Museum specimen illustrated in *BMC Vandals*, pl. V, 14 and identified as Ravenna is certainly Rome. In all details discussed above, it fits with the Rome group rather than with the Ravenna coins.

Nos. 699–702 is identical to that of the Rome group. No. 703 is similar to Nos. 699–702 in the reverse legend which ends with the Christogram and in the stance of the Victory. Otherwise it bears CONOB in the exergue, has irregularities in the obverse legend and a different type of portraiture. It is certainly an imitation but possibly not of this series.

Coins with a mint mark of Ravenna or Milan are less common and none exist in the Scandinavian finds. The single specimen with a mint mark of Ravenna in Wroth,<sup>86</sup> however, has the following characteristics: the diadem tails are straggly, the exergue mark is CONOB with the B pronounced but perfectly upright, Victory's wings are formed by horizontal lines and the coins bear the monogram of Theodoric. Nos. 704–705 in the catalogue are similar in all respects except that they have PPAVC instead of PFAVC in the obverse legend and they are without a mint mark. However, it seems quite certain that they are of Ravenna.

Two coins with a mint mark of Milan are illustrated in *BMC Vandals*, pl. VII, nos. 14–15. The diadem tails are still different from those of Rome or Ravenna, the exergue mark is CONOB, Victory's wings are formed by vertical lines and PPAVC appears in the obverse legend. Nos. 677–678 bear similarities to the Milan coins in the form of the legend, the diadem tails and the wings of Victory. On the other hand, they both have a cross adorning the helmet and the letters Θ or H in place of the mint mark. There are more analogies with the Milan coins than with the Rome or Ravenna issues, but the attribution is less certain than those of Rome and Ravenna above.

No. 706 has been identified as Burgundian by the monogram in the left field of the reverse (ΛΘ) of Gundobad and Nos. 707–715 are probably Frankish. They form a close stylistic group and are similar to specimens found in the Alesia and Chinon hoards.<sup>87</sup> Nos. 716–721 are of uncertain origin.

<sup>86</sup> *BMC Vandals*, pl. V, 15.

<sup>87</sup> Charles Robert, "Trésor de Chinon," *Annuaire de la société française de numismatique et d'archéologie* VI, 1882, 164–78; J. Lafaurie, "Le trésor d'Alesia," *BSFN* 14, no. 1 (Jan. 1959), 266–68. See also J. Gricourt, "Trésor du VI<sup>e</sup> siècle de Houdain-lès-Bavai (Nord)," *RN* 1959–60, 131–52; J. Lafaurie, "Atelier pré-mérovingien à identifier," *RN* 1962, 183–86.

## JUSTIN I

*Obverse legends*

A DNIVSTI NVSPPAVC

*Reverse legends*

a VICTORI AAVCCC

*Obverse types*

1 Bust of emperor, three-quarters facing, helmeted and cuirassed; holding lance and shield which portrays emperor on horse.

*Reverse types*

1 Victory standing l., holding ☩ cross in r. hand.  
 2 Victory standing facing, holding long cross in r. hand and globus cruciger in l.

*Constantinople*

A1 a1  $\frac{*}{\text{CONOB}}$  Sabatier not; *BMCByz.* not; Tolstoi 11 ff. (lacks off. —, A below)

722.	off. —	4.12 ↓	pierced twice; very worn.	88b	PLATE XII
723.	off. A	4.45 ↓	fair.	164c	PLATE XII
724.	off. B	4.40 ↓	worn.	178	PLATE XII

A1 a2  $\frac{*}{\text{CONOB}}$  Sabatier 1; *BMCByz.* 1 ff.; Tolstoi 1 ff.

725.	off. Γ	4.47 ↓	good.	137b	PLATE XXVIII
726.	off. I	4.37 ↓	good.	137b	PLATE XXVIII

Nos. 722–724 are of the type introduced by Anastasius and date from the first part of Justin's reign. This issue was not recognized by Wroth as official. A new reverse, represented on Nos. 725–726 with a facing Victory holding a long cross and a globus cruciger, was introduced by Justin and superseded the earlier type.

## IMITATIONS OF JUSTIN I

*Obverse legends*

A DNIVSTI NVSPFAVC

*Reverse legends*

a VICTORI AAVCCC

*Obverse types*

1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Reverse types*

1 Victory standing l., holding long cross in r. hand.

## OSTROGOTHIC

*Ravenna(?)*

A1 a1  $\frac{*}{\text{COMOB}}$  Sabatier not; *BMC Vandals*, p. 48, nos. 12 ff.; Tolstoi 103 f.

## Officina A

727.	4.41	↓ fine. 137b	PLATE XXVIII
		<i>obv.</i> : ... NVSPFAVC	
728.	4.42	↓ good. 164b	PLATE XVIII
729.	4.38	↓ good. 156a	PLATE XXVI
730.	4.47	↓ very fine. 137b	PLATE XXVIII

The four imitations of Justin are Ostrogothic and, according to Wroth, from the mint of Ravenna.

## JUSTINIAN I

*Obverse legends*

A DNIVSTINI ANVSPPAVC  
(or AVI)

*Reverse legends*

a VICTORI AAVCCC

*Obverse types*

- 1 Bust of emperor, three-quarters facing, helmeted and cuirassed; holding lance and shield which portrays emperor on horse.
- 2 Bust of emperor facing, helmeted, diademed and cuirassed; holding globus cruciger in r. hand.

*Reverse types*

- 1 Victory standing facing, holding long cross in r. hand and globus cruciger in l.
- 2 Victory standing facing, holding  $\oplus$  cross in r. hand and globus cruciger in l.
- 3 Victory standing facing, holding long cross in r. hand and globe in l.

*Constantinople (?)*

A1 a1  $\frac{| *}{\text{CONOB}}$  Sabatier 2; *BMCByz.* 1 ff. (lacks off.  $\Delta$  below); Tolstoi 3 ff.

- |      |               |      |                        |     |           |
|------|---------------|------|------------------------|-----|-----------|
| 731. | off. B        | 4.46 | ↓ pierced; fair.       | 140 | PLATE XII |
| 732. | off. $\Delta$ | 4.26 | ↓ pierced; mut.; worn. | 172 | PLATE XII |
| 733. | off. I        | 4.24 | ↓ folded over; worn.   | 122 | PLATE XXX |

A2 a2  $\frac{| *}{\text{CONOB}}$  Sabatier 3 (lacks off. below); *BMCByz.* 8 ff.; Tolstoi 27 ff.

- |      |               |      |   |       |           |
|------|---------------|------|---|-------|-----------|
| 734. | off. A        | 4.43 | ↓ folded over; worn.                                | 122   | PLATE XXX |
|      |               |      | <i>obv.</i> : ONVSTINI [      ]                     |       |           |
|      |               |      | <i>rev.</i> : $\Lambda$ ICTORI...; COMOB in ex. (?) |       |           |
| 735. | off. $\Theta$ | 4.37 | ↓ good.   | 122   | PLATE XXX |
| 736. | off. $\Theta$ | 4.42 | ↓ mut.; pierced; worn.                              | 122   | PLATE XXX |
| 737. | off. I        | 4.47 | ↓ very fine.  | 170 b | PLATE XII |
| 738. | off. I        | 4.48 | ↓ good.   | 162 c | PLATE XII |
| 739. | off. ?        | 4.26 | ↓ pierced twice; very worn.                         | 122   | PLATE XXX |

A2 a3 (light-weight solidi)  $\frac{| *}{\text{CONOB}}$

- |      |        |      |                                  |                    |           |
|------|--------|------|----------------------------------|--------------------|-----------|
| 740. | off. I | 3.72 | ↓ very worn.                     | 122. Adelson 2 ff. | PLATE XXX |
|      |        |      | <i>rev.</i> : OBX[      ] in ex. |                    |           |
| 741. | off. I | 3.70 | ↓ pierced; bent; very worn.      | 122. Adelson 30 ?  | PLATE XXX |
|      |        |      | <i>rev.</i> : OB+[      ] in ex. |                    |           |

Nos. 731–733 in the catalogue are of Justinian's first issue which continued the type introduced by Justin I. The portrait is three-quarters facing, and the emperor holds a lance and shield; on the reverse, Victory stands facing holding a long cross and a globus cruciger. A full face portrait of the emperor holding a globus cruciger appears on the coinage in 538 coupled with the earlier reverse.<sup>88</sup> This issue is not represented in the Scandinavian finds. Nos. 734–739 are of the last issue of Justinian on which Victory holds a  $\text{✚}$  cross<sup>89</sup> and a globus cruciger.<sup>90</sup> Nos. 734–735 in this series are of strange style and possibly imitations or of a mint other than Constantinople.

Nos. 740–741 are light-weight solidi and differ from the above groups not only in weight but in the reverse type which shows Victory holding a long cross and a globus only (not cruciger).<sup>91</sup> The coins are very worn but traces of OBX are visible on No. 740 and on No. 741 the exergue inscription seems to read OB+.

All of the above coins are probably issues of Constantinople<sup>92</sup> although other mints are known to have been in operation.<sup>93</sup>

### IMITATIONS OF JUSTINIAN I

#### *Obverse legends*

A DNIVSTINI ANVSPFAVC

#### *Reverse legends*

a VICTORI AAVCCC

<sup>88</sup> This issue is recognized by Wroth only as a variant of the last issue.

<sup>89</sup> Under Anastasius and Justin, the loop is to the left ( $\text{✚}$ ).

<sup>90</sup> The date of this issue is uncertain. Wroth's date of 538 can be discarded for he failed to recognize the earlier issue with a full-face portrait and Victory standing with a long cross. Lafaurie estimates its introduction in 540/45 on the basis of some rare coins of Theodebert (534–547) which imitate the  $\text{✚}$  cross held by Victory (Lafaurie, "Un solidus inédit de Justinien I<sup>er</sup> frappé en Afrique," *RN* 1962, 167 ff.). Three specimens are known but all are from the same die and it is not at all clear that it is a  $\text{✚}$  cross.

<sup>91</sup> These specimens are not in Adelson (*Light-Weight Solidi and Byzantine Trade During the Sixth and Seventh Centuries*, *NNM* 138, New York, 1957). The same type appears on solidi of normal weight marked CONOB but which are clearly not of the mint of Constantinople.

<sup>92</sup> With the possible exception of Nos. 734–735.

<sup>93</sup> Wroth has identified imperial issues from Rome and Ravenna (*BMC Vandals*, 108 ff.) and recently a solidus struck at Carthage was published (Lafaurie, *RN* 1962, 167–82). The light-weight solidi were issued from more than one mint according to Adelson (op. cit., 98 ff.) and in addition there is the series mentioned above (n. 91) of the type of the light-weight solidi but of normal weight and not of the style of Constantinople.

*Obverse types*

- 1 Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield which portrays emperor on horse.

*Reverse types*

- 1 Victory standing l., holding long cross in r. hand.

## OSTROGOTHIC

*Ravenna(?)*

A1 a1  $\frac{*}{\text{COMOB}}$  Sabatier not; *BMC Vandals*, p. 60, nos. 1 ff.  
Tolstoi 521 ff.

## Officina A

- |      |      |         |      |             |
|------|------|---------|------|-------------|
| 742. | 4.46 | ↓ good. | 179b | PLATE XVIII |
| 743. | 4.40 | ↓ good. | 179a | PLATE XXIX  |
| 744. | 4.42 | ↓ fair. | 97   | PLATE XVIII |
| 745. | 4.40 | ↓ fair. | 133  | PLATE XVIII |
- obv.*: DNIVSTIN INNVSPAC  
*rev.*: VICTORI ΛΛVCCCAΛ; CONO in ex.

## UNCERTAIN

A1 a1

- |      |      |                    |                     |                            |
|------|------|--------------------|---------------------|----------------------------|
| 746. | 4.30 | ↓ fair.            | 191                 | PLATE XVIII                |
|      |      | <i>obv.</i> :      | IQIV2TIII ANVCPΓΛVC | $\frac{*}{\text{COMOB}}$   |
|      |      | <i>rev.</i> :      | VICTORI ΛΛVCCCI     | PLATE XXII                 |
| 747. | 4.00 | ↓ with loop; worn. | 189                 | $\frac{*}{\text{[ ]ONOI}}$ |
|      |      | <i>obv.</i> :      | DNIV2TIAI ΛIVCZVIC  |                            |
|      |      | <i>rev.</i> :      | VIC[ ] VΛVCCGCC     |                            |

## MEROVINGIAN (triens)

*Obv.*: DNIVSTINIANVSPACY  
Bust of emperor r., diademed, draped and cuirassed.

*Rev.*: VICTORIA + ACYSTORYM  
Victory walking r., holding wreath in l. hand.  
COMOB in ex.

748. 1.50 ↓ with loop; very worn. 201. Tomasini No. 400

Nos. 743–745 are Ostrogothic issues which Wroth assigns to Ravenna while Nos. 746–747 are imitations of uncertain origin. The single triens found in Scandinavia is No. 748, a Merovingian issue.

# THEODEBERT

*Obv.*: DNTHEVDEBE RTVSVIC- *Rev.*: VICTOI AV[ ]  
TOR

Bust of Theodebert, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield.

Victory standing facing, holding long cross in r. hand and globus cruciger in l.; .. l. and r. above wings.

ICONOB

749. 4.46 ↓ pierced but refilled; very worn. 122 PLATE XXX  
cf. Belfort, 4818 (Vienna)

# UNCERTAIN IMITATIONS OF FIFTH-SIXTH CENTURY SOLIDI

*Obv.*: Bust of emperor, three-quarters facing, helmeted, diademed and cuirassed; holding lance and shield. *Rev.*: Constantinople seated l., holding globus cruciger in r. hand and sceptre in l.

750. 4.50 ↓ worn. 203 PLATE XVIII

*obv.*: MTTTMTT TTTMTT

*rev.*: XXXX VVXXXX

751. 4.32 ↓ worn. 159 PLATE XVIII

same dies as above

752. 4.27 ↓ worn. 220 PLATE XVIII

*obv.*: AD2TTOO CTVdTAG (retrograde)

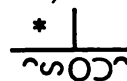
image reversed

*rev.*: VOTXX HVT XXXX

COHO[ ]



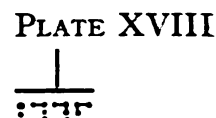
753. known through literature only. 12  
 Janse, p. 66, fig. 11  
 • *obv.*: ΣΓΓΙΟΙΥ[ ] CNOCIAVΘ (retrograde)  
 image reversed  
*rev.*: CIVXX OCOXXXCAI



*Obv.*: As above.

*Rev.*: Victory standing l., holding long cross in r. hand

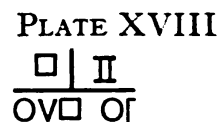
754. 4.48 ↓ pierced; worn. 18  
*obv.*: ▶⊙▷ΣΧΧΘ-22Θ  
*rev.*: •J=Δ [ ]ϚΞ



*Obv.*: Bust of emperor r., diademed, draped and cuirassed.

*Rev.*: Emperor in military dress, standing r., holding standard in r. hand and Victory on globe in l.; l. foot on captive.

755. 4.25 ↓ coin in two pieces; fair. 156a  
*obv.*: V[ ]ΔVTOO ΦΟΧΗΓΟΛΟ  
*rev.*: ΟΗΙ[ ]ΟΟΟ ΝΟΟΟ□[ ]



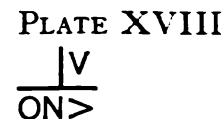
*Obv.*: As above

*Rev.*: Emperor in military dress, standing facing, holding long cross in r. hand and Victory on globe in l.; r. foot on serpent.

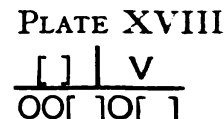
756. 4.54 ↓ very worn. 212  
*obv.*: Π[ ] ΠΠΧΧΧΧΧΧΓΝΗ  
*rev.*: Ν[ ] ΟΧΧΧΧΧΧΧVZ



757. 4.33 ↓ worn. 176  
*obv.*: ΧΧΝVΤCCC ΧΧΧΤΙVΘ  
*rev.*: ΠΛVCCC◀ ΧΧΧΤ▷Π/□



758. 4.28 ↓ pierced; very worn. 138  
*obv.*: ΙΙΙΙΙΝΞΙΙ [ ]  
*rev.*: ]Ι[ ]ΤΟ[ ]Ι[ ]CC[ ]



759. 3.90 ↓ good. 184 PLATE XVIII  
*obv.*: ]PVI+ 2P VV29VV7 (retrograde)  
 image reversed; cross in l. field  
*rev.*: ]TO+ ΛANP P P ⊙ (retrograde)  $\frac{V|*}{\odot [ ]}$   
 image reversed

The remaining solidi have completely meaningless obverse legends and have been classed as uncertain. Although they are clearly imitations of fifth and sixth century solidi they cannot be identified with certainty as imitations of a particular emperor. Nos. 750–753 with a seated figure of Constantinople seem to be imitations of the VOT XXX MVL T XXXX type commemorating Theodosius' *tricennalia* in 430.<sup>94</sup> In all probability these are imitations of coins of Theodosius but the type appears on coins of Valentinian III and Leo I also.<sup>95</sup> No. 754 represents the very common Victory type introduced by Marcian and used extensively thereafter in the East and for a short time in the West. The type with the emperor facing right with his foot on a captive (No. 755) is known on western issues of several emperors in the first half of the fifth century<sup>96</sup> while the type with the emperor standing facing, his foot on a serpent (Nos. 756–759) is common on western issues in the second and third quarters of the fifth century.<sup>97</sup>

The unusual character of many of the imitations in the Scandinavian finds is at once apparent to anyone who has worked with this material. In particular, the imitations of Honorius, Theodosius II and the uncertain group defy comparison with any of the published series and yet they often are represented in the Scandinavian finds by two or more specimens from the same dies. Their origin and the identification of their manufacturers must remain unknown until

<sup>94</sup> The seated figure of Constantinople also appears on the *Imp 42* issue of Theodosius (issued for Valentinian and the empresses also) and possibly this is the prototype for No. 753.

<sup>95</sup> See section on identical dies, page 122, for dating of the imitations.

<sup>96</sup> In this catalogue the type appears on coins of Honorius, Valentinian III and Arcadius. It is also known on coins of Galla Placidia, Constantine III, Attalus, Jovinus, Constantius III, Johannes, Theodosius II and Avitus.

<sup>97</sup> See coins of Valentinian III, Majorian, Libius Severus and Leo I in this catalogue for the same type. The type also appears on coins of Petronius Maximus, Anthemius (known only in Cohen and probably barbaric—see above, p. 25, n. 39) and Marcian.

a corpus of comparable pieces with provenances is made.<sup>98</sup> The following data will be useful: one Polish find is from the same dies as Nos. 750–751; a Caseburg coin is from the same dies as No. 758; a coin described in Friedländer<sup>99</sup> would seem to be identical with No. 754. Two specimens, both in private collections, one of which was in Turin, were known to Friedländer.

<sup>98</sup> The possibility that some of these may be of Scandinavian origin warrants further study. See under Honorius, page 10, n. 13.

<sup>99</sup> *Die Münzen der Ostgothen* (Berlin, 1844), 8.

PART II:

DISCUSSION AND ANALYSIS OF THE MATERIAL



## LITERATURE

The problem of the Scandinavian solidi has been extensively discussed by archaeologists and historians from various points of view and it may be desirable to summarize the main arguments and conclusions of these writers.

The first discussion of the historical implications of the solidi appeared in 1882. The author was Hans Hildebrand who had already contributed several works on Scandinavian studies.<sup>1</sup> Hildebrand's commentary cannot really be said to have stimulated study of the solidi problem, for it was not until twelve years later that an objection to his arguments was made by Montelius (in a footnote) and it was thirty-seven years before a study appeared which was devoted solely to this subject. Nevertheless, Hildebrand's treatise was the first and most of the studies which eventually followed it began their discussion by reviewing and criticizing Hildebrand's thesis.

Hildebrand believes that the solidi were introduced to the North by means of trade contacts between the Scandinavians and their Germanic relatives. There is no doubt, in his opinion, that direct relations between the North and the Byzantine Empire existed at this time. It is understandable, he writes, that individuals from the various Germanic tribes visited one another and that the North Germans were lured to the South when they heard of all the many wonderful things to see and obtain. Some of the inhabitants within the Empire felt a similar curiosity about the North and it was not impossible to consider a journey to Scandinavia. Procopius refers to the land of Thule and desires to visit it himself because of all he has heard from others who had lived there.

<sup>1</sup> Hans Hildebrand, *Från äldre tider* (Stockholm, 1882), 58-73. See also his "Sous d'or ostrogoths frappés en Pannonie et trouvés en Suède," in *Congrès international de numismatique, Bruxelles 1891* (Brussels, 1891), 421-27 where he summarizes his conclusions presented in the earlier work and comments on some unusual imitations which he believes were struck by the Ostrogoths in Pannonia.

Since East Roman solidi are more numerous than West Roman among the finds in Scandinavia, Hildebrand believes that the coins originated in the Byzantine Empire. He says that none of the coins struck by the Germans in Italy after the fall of the West are found in Sweden.<sup>2</sup> Moreover, the distribution of solidi is concentrated in eastern Scandinavia with very few finds in Jutland, western Sweden and Norway and thus a more eastern approach is indicated. He presumes from finds of coins that the solidi originated in the Byzantine Empire and passed through Austria, Hungary and Poland. The south coast of the Baltic is especially rich in solidi finds of this period.

According to Hildebrand, the stream of coins began in earnest after the fall of the empire of the Huns which reopened the ways of communication between the North and South. The greatest number of coins came before 474 and the break-up of the solidi stream occurred, for the most part, after 488 under the emperor Zeno when the Ostrogoths invaded Italy. Evidently connections with the North Germans were severed when the Ostrogoths left Pannonia. Furthermore, after leaving Pannonia and Moesia they no longer received tribute payments from the Byzantine emperors.

As for those coins found in Scandinavia from the period after 488. Hildebrand explains that some traffic could have continued after this time. The great number of coins of Anastasius found on Gotland are the result of an isolated event, for they were brought by the Heruli returning to Scandinavia. Procopius mentions the occasion when this tribe, having been defeated by the Langobards in 512, left their homes in the Middle Danube and a part of them migrated to the "land of the Götar."

Montelius pointed out, several years later, that it is not known whether the "land of the Götar" refers to Gotland (the island) or to Götaland (the province) and, in any case, one needs to explain not only the frequency of Anastasius' coins on Gotland but their absence on Öland.<sup>3</sup>

<sup>2</sup> Hildebrand was mistaken about this since even in his time several Ostrogothic pieces struck in Italy had been unearthed.

<sup>3</sup> Oscar Montelius, "Den nordiska järnålderns kronologi," *Svenska fornminnesföreningens tidskrift* 10, 1895-97, 106, n. 3.

Von Friesen tried to show, in 1918, by philological evidence, that the Heruli did not settle on Gotland but rather in the southeastern part of Götaland, in Varend and Blekinge.<sup>4</sup>

Certain aspects of the solidi finds were discussed toward the end of the century by P. Hauberg, the Danish numismatist.<sup>5</sup> Hauberg made an important observation on the coin material which has been overlooked by later writers; he noted that many of the coins were worn and concluded that they had been circulated in Scandinavia for a considerable time. The fact that some of the coins had been pierced and refilled also indicated circulation of the solidi and not merely as bullion to be weighed with each transaction but as coins with a fixed value.<sup>6</sup>

In 1905, Knut Stjerna attempted to present evidence—archaeological, literary and oral tradition—that the Northmen's struggles as described in the Anglo-Saxon poem Beowulf took place during the Migration Age.<sup>7</sup> Although Stjerna's work was not primarily a study of the solidi problem, it was concerned with one phase of it and that was in accounting for the end of the solidi stream in the sixth century.

According to Stjerna, the disruptive elements present at the end of the Migration Age culture in Scandinavia are the result of conquests by the Svear over the Götar.<sup>8</sup> The situation in Scandinavia is likened to that on the Continent, but in miniature. The Svear in North Sweden are strong but barbaric while the Götar in South Sweden and in the islands are wealthier and have a higher culture but are weak and less numerous because of successive emigrations.

<sup>4</sup> Otto von Friesen, "Herulernas bosättning i Skandinavien," *Studier tillägnade Esaias Tegnér* (Lund, 1918), 484 f. Quoted by Janse, p. 32.

<sup>5</sup> P. Hauberg, "Médailles romaines d'or et d'argent d'avant le milieu du VI<sup>e</sup> siècle trouvées dans les pays scandinaves," *Mémoires de la société royale des antiquaires du Nord* 1895, 381–405; "Skandinaviens fund af romersk guld-og sølvmynt før aar 550," *Aarbøger for nordisk oldkyndighed og historie* 1894, 325–76.

<sup>6</sup> P. Hauberg, "Médailles romaines," p. 401. Hauberg had noticed these repairs on several denarii as well as on a solidus.

<sup>7</sup> Knut Stjerna, "Svear och Götar under folkvandringstiden," *Svenska fornminnesföreningens tidskrift* 12, 1905, 339–60.

<sup>8</sup> The Swedish term "Götar" is used throughout to refer to those Goths inhabiting South Sweden and the islands to distinguish them from the Goths in South Europe.



As on the Continent, the northern barbarians moved down and overwhelmed the southern inhabitants. This explains the termination of the coin hoards on Öland and Gotland and on the basis of the latest coins present in the hoards, Stjerna dates the conquest of Öland and Blekinge to ca. 500 and that of Bornholm and Gotland, about fifty years later. The Svear conquest of the Götar accounts for the large treasures present in Svealand which represent plunder from the conquest.

The successive emigrations mentioned above had important consequences for Scandinavia. On the positive side it brought them in contact with a superior culture, did much to enlighten the Northerners, and also produced a literal Golden Age in Scandinavia. On the other hand, it reduced the population of the more civilized Götar, leaving them vulnerable to attack by the Svear.

Stjerna was the first to present the thesis that the gold hoards in Scandinavia were buried as a result of internal events. This belief was then explored and held by many writers after him. However, Stjerna also discussed the relation of events in South Europe to the end of the gold stream. The gold reached Scandinavia, in the first place, through contacts with East German princes in the South who were famous for their accumulation of huge treasures. The Scandinavians sent reinforcements to the South in exchange for the gold and the traffic passed through the Vistula region. The fall of the East German kingdom in the middle of the sixth century cut off the supply of gold to Scandinavia. Thus, Stjerna suggests a distinction between the cause of the interruption of the gold stream and the cause of the deposit of the coins in the ground.

T. J. Arne's study in 1919 was the first after Hildebrand's to deal specifically with the solidi problem.<sup>9</sup> Arne reviews the conclusions of Hildebrand and Stjerna and then states his own views which may be summarized as follows: The solidi on Öland and Gotland are not a result of trade, but rather they are isolated examples of contact with the South. The argument for this is that some areas in Sweden which are unusually rich in gold objects have very few coins. Thus there is no connection between the solidi and the unminted gold and the coins must have been a result of separate and distinct activities.

<sup>9</sup> T. J. Arne, "Solidusfynden på Öland och Gotland," *Fornvännen* 14, 1919, 107-11.

The solidi on Öland were brought there about 480 by Germanic troops from Hungary who were related to the Götar and who had answered the Götar's appeal for help when attacked by the Svear. The coins were deposited in the soil shortly after their arrival as a consequence of the attacks. According to Arne, the hoards are not evenly distributed over Öland and thus there could not have been a very long interval between their arrival and their deposit. He narrows down the number of find places from about fifty to eight or nine central places where the coins must have first arrived as treasures of chiefs and then were distributed to small groups of people. The latest coins are of Zeno (except for one solidus of Justin which Arne does not consider a part of the earlier material) and since there are only a few coins of Zeno but many of Libius Severus who had a short reign, the coins must have arrived a few years after Zeno's reign began or about 480.

On Gotland the hoards are smaller, less numerous and distributed somewhat more evenly over the island. This is regarded as proof of a longer period of circulation between their arrival and deposit in the ground. Western coins are quite rare and coins of Anastasius are predominant, with a few specimens also of Justin I and Justinian I. They all must have arrived, Justin and Justinian excepted, with auxiliary troops in the second decade of the sixth century during the reign of Anastasius. Arne concluded that Gotland maintained connections with the South longer than did Öland and that a catastrophe did not overtake Gotland. The technique of the inlay of garnets known on Gotland and introduced about 500 is further evidence that the culture continued to develop there and is also indicative of contact with Hungary.

A more extensive study by Olov Janse appeared three years after Arne's article.<sup>10</sup> This work lists all finds of solidi, bracteates and other gold objects from A.D. 395 to 565 found in Sweden. In addition, there is a lengthy commentary in which Janse presents new points of view on some of the problems connected with the solidi.

Janse divided Scandinavia into a North Zone and a South Zone,

<sup>10</sup> Olov Robert Janse, *Le travail de l'or en Suède à l'époque mérovingienne* (Orléans, 1922). See also his "Notes sur les solidi romains et byzantins trouvés en Scandinavie," *RN* 1922, 33-48.

the former consisting of Gotland, Svealand and Norrland and the latter of Skåne, Blekinge, Kalmar län, Öland and Bornholm. The North Zone had yielded, in 1920, 10 Roman and 126 Byzantine coins while the South Zone had 100 Roman and 203 Byzantine solidi. Of the 126 Byzantine coins in the North Zone, 95 were from Gotland. Different routes fed the two areas, a western route via the Oder River led to the South Zone and a more eastern route via the Vistula terminated in the North Zone. Two hoards on Gotland (North Zone) contain Roman coins and have South Zone characteristics. Janse believes that these must have come with the South Zone coins to Öland and then were transferred to Gotland. The importation ceased first on Öland under Zeno, on Bornholm under Anastasius, and last of all on Gotland under Justinian.

In accounting for the Öland and Gotland solidi, Janse rejects Hildebrand's basic theories regarding the commercial nature of the activity with the Ostrogoths and also the role of the Heruli. Regarding Gotland, he refers to the "Guta saga" which records an emigration of one third of the inhabitants of Gotland. The saga, committed to writing in the fourteenth century, relates that the emigrants passed through Russia to Byzantium and sometime after this, Gotland was overthrown by the Svear. Janse quotes Nerman as having shown that the emigration took place at the end of the fifth century and the conquest by the Svear ca. 550.<sup>11</sup> Janse would agree with this and points to the Kaggeholm hoard in Svealand, which has analogies with the Gotland hoards, as support for the conquest. He supposes also that the emigrants had returned to Gotland to take part in the struggles and that it was at this time that the Gotland solidi were introduced by the eastern route mentioned above. The coins on Öland and Bornholm were also introduced *en bloc*.

Janse believes that Öland and Bornholm were conquered not by the Svear, as maintained by Stjerna, but by the Gotlanders. This would account for the South Zone-type hoards on Gotland as spoils of war. It is less likely, he maintains, that the Svear would have turned against Öland and Bornholm before conquering Gotland. Moreover, if the Svear had conquered Öland one would expect to find analogies between the hoards of Svealand and Öland, but this

<sup>11</sup> Janse, *Le travail*, p. 35.

is not the case. Instead, the analogies are with Gotland which indicates that Gotland was itself conquered by the Svear in the middle of the sixth century.

Birger Nerman's book, *Det svenska rikets uppkomst*, includes a chapter on archaeological questions of the period 400–600 which involves a fairly extensive criticism of earlier studies and the presentation of Nerman's own views.<sup>12</sup> Nerman's objection to Hildebrand's thesis that events in South Europe affected the solidi import to Scandinavia is that it does not explain why the coin stream continued to Bornholm after it had stopped on Öland. Hildebrand had supposed that the Ostrogothic invasion of Italy under Zeno cut off connections between the North and South Germans and that at the same time the tribute payments ceased. He accounted for the coins that appeared on Gotland after this as having been brought by the returning Heruli. Thus he neglected Bornholm's late coins entirely.<sup>13</sup> Since coins continued to reach some areas in the North and not others, Nerman believes that the answer to the difficulties must lie in events in the North.

Arne's opinion, it will be remembered, was that a catastrophe occurred on Öland but not on Gotland and that the coins were brought to the two islands on two different occasions. Nerman argues that the differences between the two islands are not so great that one may refer to a catastrophe on one but not on the other. He thinks that destruction occurred on both islands and that the problem is to identify the attackers. Stjerna had named the Svear as the aggressors in both cases, Janse attributed the Öland attacks to the Gotlanders but the conquest of Gotland to the Svear, and Nerman disagrees with both. Regarding the conquest of Öland he thinks that the Danes, rather than the Götar, were more likely the attackers since the latter were not a warlike people. He alludes to the period of Rolf in the second half of the sixth century when Öland was probably under the control of the Danes. This acquisition was made, he thinks, at the close of the fifth century and coin hoard analogies support this relationship.

<sup>12</sup> Birger Nerman, *Det svenska rikets uppkomst* (Stockholm, 1925).

<sup>13</sup> Actually, Hildebrand did account for these late coins in his statement, "some traffic could have continued after this time (488)..." See above, p. 84.

Nerman believed that there was insufficient archaeological evidence for many of Stjerna's statements, particularly regarding Östergötland, Blekinge and Södermanland. Stjerna had stated that archaeological evidence was conclusive in indicating a complete break in these areas as well as on Gotland, Öland and Bornholm in the middle of the sixth century. New archaeological types appeared which had prototypes in Svealand, the coin stream was interrupted, and so on, all of which in his opinion proved a Svear conquest. But only on Gotland, according to Nerman, are Stjerna's conclusions valid, for here there are new types in certain groups which have prototypes in Svealand. On the other hand, the grave finds on Gotland are undisturbed, the house remains are inconclusive, and it is in fact impossible to identify the attackers of this island or to associate the end of the solidi stream on Gotland with events in the North.<sup>14</sup> It is certain only that the island experienced a period of unrest about 500. Nerman also believes that an emigration from Gotland to the East Roman Empire occurred ca. 475.

Sture Bolin's important study of coin hoards appeared in 1926.<sup>15</sup> On the basis of finds from various periods and areas, Bolin came to the conclusion that coin hoards are buried in the earth during periods of danger and instability. Thus areas which have yielded many finds were not necessarily areas of wealth and prosperity but areas of unrest and conflict. This is true only of areas with many finds, however, and a single hoard has no such significance. Indeed, he formulates a maxim: The greater the number of hoards, the greater the dangers of war. There is a risk in assuming economic importance for areas rich in hoards. If a prosperous region was not threatened by war there would be no powerful motivation for hiding gold, thus preserving it for posterity. All that can safely be said about areas rich in hoards is that they suffered from war. Bolin does acknowledge that the coins in Scandinavia represent a certain prosperity resulting from trade, but he stresses the point that this wealth was not necessarily restricted to Gotland, Öland and Bornholm—those areas with the most hoards.

<sup>14</sup> This represents a change of opinion for Nerman. See above, p. 88, where in an earlier work quoted by Janse he had stated that the Svear conquered the island.

<sup>15</sup> Sture Bolin, *Fynden av romerska mynt i det fria Germanien* (Lund, 1926).

Thus, Bolin identified a period of discord in Scandinavia which overtook Öland ca. 450–490, Bornholm and Skåne ca. 475–525 and Gotland and the Mälaren area ca. 500–560. The cause of this disturbance was most probably the expansion of the Slavs along the south coast of the Baltic Sea.

Arne in turn pointed out that Bolin's dates of warfare imply that solidi continued to be imported during war as regularly as in peaceful times and this he considered unlikely. He also referred to the Viking hoards which cover a period of several centuries and doubted that any war lasted that long.<sup>16</sup>

Bolin replied to Arne's comments and explained that he had not wished to imply that the periods stated above were periods of constant struggle but rather that they were periods of intermittent warfare which would allow trade to continue.<sup>17</sup>

The objections made by Arne mentioned above appeared in a report on two new finds on Gotland. The discovery of the hoards at Smiss and Botes occasioned the report along with a new discussion of the solidi problem. Arne presents several hypotheses on how the coins might have reached the North but he does not favor one over the others, nor does he attempt to reconcile his views on the new hoards with those expressed earlier. A western character is evident in the new finds and Arne believes that they must have originated in France or Italy. The Smiss coins could have been brought to Gotland when the Ostrogoths were expelled from Italy in 553 and were dispersed to the North. Or, they could have been assembled in France and traveled along the coast to the North. A third possibility is that the Lombards, located between the Theiss and the Danube and allied with the Franks, could have served as intermediaries. Arne is definite only in stating that the coins were carried up *en bloc* and that they originated in the West.

<sup>16</sup> T. J. Arne, "Deux nouvelles découvertes de solidi en Gotland," *AA* II, 1931, 1–28.

<sup>17</sup> Sture Bolin, "Neue Literatur über römische Münzfunde im freien Germanien," *Germania, Korrespondenzblatt der römisch-germanischen Kommission des archäologischen Reichsinstituts* XV, 1931, 267–71. Stenberger also points out that the Viking hoards are a case in point for they fall into three distinct groups and indicate three periods of warfare which resulted in the hoarding (*Vallhagar: A Migration Period Settlement on Gotland/Sweden*, II, Stockholm, 1955, 1170).

The hoard of Botes, whose latest coin is of Justin I and which includes two coins bearing the monograms of the Ostrogoth Theodoric and the Burgundian Gundobad, must have arrived ca. 525–530. Arne connects it with the return of the Hygelac-Chochilaicus expedition to Frisia in 528 with which an embassy of the Heruli came to look for a new king. But regarding the Öland finds in general, Arne refers to a route passing through Hungary and Germany which reached the Baltic at a point perhaps more western than the mouth of the Vistula. The Gotland solidi also were most probably introduced by a route more western than had been believed.

In 1933, Mårten Stenberger published the results of his archaeological excavations on Öland.<sup>18</sup> Over the entire island he found evidence of desertion, destruction, burning and a decline in skeletal remains in the early sixth century. From this, he concludes that the island was destroyed at the end of the fifth century. His conclusions regarding the disaster are in agreement with those reached by Bolin who had analyzed only the numismatic material, but Stenberger does not identify the attackers.

In his review of the work, Lindqvist argued that Stenberger had exaggerated the destructive forces and he maintained that the island was deserted at this time as a result of a voluntary migration to the South.<sup>19</sup>

A comparable archaeological report on Gotland in the Migration Age was published by Nerman in 1935.<sup>20</sup> According to Nerman, the Gotland solidi arrived for the most part after 475 and the latest hoards were deposited ca. 560–570. He agrees with Bolin that it is impossible to determine the route by which the coins arrived. In his concluding summary of the archaeological material, he states that Gotland was relatively peaceful during the greater part of the fifth century and that between 475–500 a great migration from Gotland to the East Baltic took place. This was followed by a period of unrest on Gotland and a great influx of the Svear ca. 550–560. The cause

<sup>18</sup> Mårten Stenberger, *Öland under äldre järnåldern* (Stockholm, 1933), pp. 202–12.

<sup>19</sup> Sune Lindqvist, review of Stenberger in *Fornvännen* 29, 1934, 124–28.

<sup>20</sup> Birger Nerman, *Die Völkerwanderungszeit Gotlands* (Stockholm, 1935), pp. 59–62, 126–29.

of the unrest cannot be determined definitely, however, and he rejects all notions of Götar or Slavs. On Öland it was quite certain that conquest did occur which interrupted the import of coins to that island but on Gotland the evidence is less certain. Regarding Stjerna's hypothesis that the Svear conquered Gotland and caused the hoards to be deposited, he says only that the coin material does not speak out against it, but it does not prove a Svear conquest.

Werner Knapke discusses certain aspects of the problem in his studies of coin finds which appeared in *Acta Archaeologica* in 1941 and 1943.<sup>21</sup> The discussion is concerned primarily with those countries surrounding the Baltic Sea but find material from other parts of Europe, including the Netherlands, France, Switzerland, Germany, Austria, Hungary and the area in Russia north of the Black Sea is also listed. On the basis of coin finds, Knapke identified three routes which were used to bring the Roman and Byzantine solidi to the North. The first originated in Dacia and Pannonia, passed over the Theiss and Danube Rivers through the Carpathian Pass to the Vistula and terminated in the Baltic islands. The Oder and Warthe Rivers were not utilized. This route brought East Roman solidi almost exclusively and the carriers were the Gepidi, the Goths and the Heruli. A second route, also carrying East Roman solidi only, began in Ostrogothic territory north of the Black Sea, continued north via the Dnieper, Dniester and their tributaries to Galicia and over the Vistula/Bug route to the Baltic. This route operated from the time of Theodosius II to Justinian I. The third route brought West Roman solidi to Scandinavia, originating in the territory of the Alemanni, Franks and in Frisia, Sachsen and Thuringia. The route followed the Rhine and Weser Rivers to the North Sea and from there to the Baltic. The solidi were the result of trade between the North and South which was augmented by returning warriors who received tribute or pay for military service in the imperial armies.

In a popular account of Sweden's Golden Age, published in 1945, Sune Lindqvist develops his thesis which had become known through

<sup>21</sup> Werner Knapke, "Aurei- und Solidi-vorkommen an der Südküste der Ostsee," *AA* XII, 1941, 79-118; "Aurei- und Solidi-vorkommen am Mare Balticum," *AA* XIV, 1943, 55-66. Reviewed by N. L. Rasmusson in *Nordisk numismatisk unions medlemsblad*, Aug. 1944, 83-84.



various works and reviews on related topics.<sup>22</sup> The solidi were brought back by returning warriors who had been in the service of the Byzantine armies. The Öland coins were introduced during the period of Odovacar in Italy and the Gotland coins were contemporary with Theodoric the Ostrogoth. Then, after 475 the Öland houses were burned and deserted and the population, considerably fewer in number, settled on the coast. This desertion and the population decline can only be explained by a voluntary emigration. He also asserts that some of these displaced people migrated to Italy where they received shares of the "Herulian Acres."

Gotland showed evidence of a similar destruction whose effects, however, were not as permanent. Gotland was affected in still another way which resulted in the introduction of Continental influences from Central Europe and Italy in the sixth century. Lindqvist argued that there must have been an immigration this time, from the South to Scandinavia. Whether the same people who left earlier are involved here, he is reluctant to say. In any event, the two hoards of Smiss and Botes were brought by these immigrants in the first three decades of the sixth century.

The curious phenomenon of the solidi also attracted the attention of scholars outside of Scandinavia; notably Joachim Werner whose study of the hoards on Gotland and Öland holds an important place in the literature on the solidi.<sup>23</sup> Werner draws a distinction between the coin series for the two islands. Gotland's solidi fall mainly in the time of Anastasius and continue past 538 while Öland's solidi are most abundant in the reign of Leo I and include only one coin of Anastasius. It is his opinion, based on a statistical analysis, that Öland's coins were deposited between 480 and 490. Furthermore, the deposit was caused by a major destruction of the island in which almost all the old settlements were destroyed or abandoned and, when new settlements did appear, they were located on the coast rather than inland. Although many of the smaller finds may have a *terminus post quem* of an earlier date (457, 461 or 467) it is probable

<sup>22</sup> Sune Lindqvist, *Vår svenska guldålder* (Uppsala, 1945). See also his "Ölands och Gotlands Solidi," in *Fornvännen* 45, 1950, 160-63.

<sup>23</sup> Joachim Werner, "Zu den auf Öland und Gotland gefundenen byzantinischen Goldmünzen," *Fornvännen* 44, 1949, 257-86.

that all were deposited at the same time, between 480 and 490. According to Werner, no other place shows such overwhelming evidence for a disastrous decade as does Öland.

The Öland and Gotland coins arrived via a Vistula/Oder route and since the stream continued to Gotland for several decades after it ceased on Öland, Werner rejects Bolin's theory concerning the movements of Slavs in the area of the south Baltic coast which surely would have affected the Gotland stream as well.

The cause of the disturbances which overtook Öland cannot be determined but the archaeological evidence is conclusive in regard to the destruction. Moreover, the gold finds in excavated sites are associated with a burnt layer which is further evidence for relating the burial of the coins to the destruction.

The Öland coins originated in Italy and Hungary and are not a result of trade but rather they represent the tribute money paid to Germanic tribes and also the payments for military service in the imperial armies. The stream to Öland began under Arcadius and Honorius at the beginning of the fifth century but the most intense period was from 450–480, during the time of Ricimir and Odovacar in Italy. The coins traveled *en bloc* and not indirectly as is the way of trade.

Werner argues that the island of Öland is an isolated case whose destruction has given us a cross section of the existing coinage at the time of the disaster. We can assume a similar situation in other parts of Scandinavia whose coins have not been preserved for us through events of invasion and war.

Werner also discusses the fortification of Ismantorp on Öland, unique in Scandinavia, which is patterned after a fifth-sixth century Byzantine model, other types of which are known in Bulgaria and Italy. He offers it as further evidence of contact with the Roman world and, more specifically, suggests that it was built by returning warriors in the second half of the fifth century who were familiar with this type of fortification from their service in the imperial armies.

The coin stream to Gotland continued for seventy years beyond that on Öland and is most intensive during the reigns of Zeno and Anastasius. The coins of Justinian, few in number but including late issues, suggest that the stream may have begun to dry up before its

final end ca. 550–560. A period of disturbances overtook Gotland at this time which caused the coins to be buried but it was not as destructive as on Öland. Of the coins of Anastasius at least thirty per cent, and possibly sixty per cent, are Italian strikings, indicating an Italian/Hungarian source.

The Gotland coins are a result of trade in furs, pelts and amber which were very desirable in the court of Theodoric. This trade could have continued after the death of Athalaric and down to 535 when the Ostrogoths lost control of Sirmium. The later solidi of Justinian present on Gotland could represent the subsidies paid by the emperor to the Heruli and Gepidi. The solidi import came to a close as a result of developments in the middle Danube and in Italy in the mid-sixth century. Invasions of the Langobards, Avars and Slavs interrupted the relative peace which had existed under Ostrogothic rule.

The solidi finds were an important factor in Mogens B. Mackeprang's work on the bracteates.<sup>24</sup> He dated the earliest bracteates on the basis of his interpretation of the solidi finds. Since the bracteates are found only with fifth century solidi, it was necessary for him to date both the beginning of the importation and the deposit of the hoards. He notes that fourth and fifth century solidi in Scandinavia are never mixed, a fact which can only mean that an interval of time elapsed between the importation of the two groups of solidi. He therefore came to believe that the fifth century solidi found in the hoards, including the early issues of that century, did not reach Scandinavia until the end of the fifth century. From an examination of 14 hoards containing 10 or more solidi he concludes that all the hoards—even those on Öland—were not deposited until the sixth century or even later. The validity of his chronology for the earliest bracteates rests upon these two assumptions.

A more recent discussion of the problem appeared in 1955 in the imposing work on the Gotland settlement of the Migration Age, Vallhagar.<sup>25</sup> The study is relevant for all of Gotland and much of Scandinavia as well. Of particular interest to us is the concluding chapter by Stenberger, concerning the causes for the desertion of the

<sup>24</sup> Mogens B. Mackeprang, *De nordiske guldbrakteater. Jysk arkæologisk selskabs skrifter*, II (Aarhus, 1952).

<sup>25</sup> Mårten Stenberger, *Vallhagar*, 1161–85.

site in the sixth century. Closely connected with its abandonment are the gold hoards found elsewhere on Gotland and thus Stenberger reviews all earlier theories on the relationship of the hoards to the destruction of the island.

Although he is in agreement with some of the earlier theories, he claims that there is no evidence for Nerman's belief that a migration took place from Gotland to the East Baltic or for Lindqvist's opinion that there was a migration to Italy. That a climatic change or cattle disease was responsible for the population decline is rejected after a thorough analysis of the evidence. He is certain only that war did take place on Gotland, as Bolin and others had believed, but unlike them, he hesitates to name the attackers. The time of the destruction is uncertain. Stenberger denies there is evidence for the uniform date of deposit as suggested by Werner for Öland (480–490) and Gotland (550–560). Rather, he prefers Bolin's interpretation that the Gotland hoards were buried over a period of time, between 500–560, as a result of intermittent warfare such as had taken place on Öland just before this.

And, finally, Ole Klindt-Jensen touches briefly on the problem of the solidi in the published results of his archaeological excavations on Bornholm.<sup>26</sup> The solidi on Öland, Gotland and Bornholm represent part of the enormous tribute payments and ransom money paid by the Byzantine emperors to barbaric tribes which found its way North. The hoards were buried as a result of war which occurred on Öland at the end of the fifth century, on Bornholm at the beginning of the sixth century and on Gotland toward the latter part of the sixth. The stream began ca. 400 and single finds later than the above mentioned dates indicate that the import to Öland and Bornholm did not cease entirely with the destruction of these islands. The evidence for war is similar to that on Öland and Gotland; settlements were burned and deserted and when new settlements appear, they are located on the coast. He does not identify the attackers but suggests that the wealth of the inhabitants was the most probable cause of their afflictions.

From the above discussion it is evident that there is very little

<sup>26</sup> Ole Klindt-Jensen, *Bornholm i folkevandringstiden. Nationalmuseets skrifter. Større beretninger*, II (Copenhagen, 1957).

agreement on the problems associated with the Scandinavian solidi. Since the first excavations on Öland and Gotland, much of the research has been directed toward the problem of understanding the changes that occurred in Scandinavia at the end of the Migration Age, a problem in which the coin hoards play an important part. Although there is a general consensus of opinion that war occurred on Öland, Gotland and Bornholm (and even this is disputed by some writers) there is no agreement on the identity of the attackers. The most recent studies are also the most cautious; neither Stenberger in his discussion of Vallhagar nor Klindt-Jensen in his study of Bornholm even suggest the possible source of the attacks.

On all other problems inherent in the finds there is only confusion. Many of the writers have accounted for the coins in the Baltic area by two or more unrelated phenomena. For example, Hildebrand attributed the Öland coins to trade with the Ostrogoths in Pannonia and the Gotland coins to the Heruli who settled Gotland in the early sixth century. More recently, Werner attributed the Öland coins to Germanic soldiers who returned to Scandinavia while the Gotland coins were the result of trade with the Ostrogoths in Italy. The beginning of the stream has been stated to have been as early as 400 or as late as the end of the fifth century. Still others believe that the coins were brought up *en bloc* on one or two occasions at the end of the period and that it was not a stream, properly speaking, at all. The origin has been regarded as eastern by some writers and western by others. Routes ranging from the Russian rivers in the East to the Rhine and North Sea in the West have been suggested. In short, at just about every point there are differences of opinion and some scholars believe that no definite solution is possible.

The differences of opinion derive not so much from the new material discovered through the years as from the interpretation of the material. It is true that many finds have been made since Hildebrand's time and that thorough archaeological reports of the Baltic islands have been made, but the interpretations have remained just as diversified. They reveal often a preconceived preference for one or more of the literary sources for the period and the solidi have been explained in light of what we know from the literature, rather than the reverse. But the literary sources cannot, by themselves, explain

the solidi for us. There are several passages referring to barbaric tribes passing this way or that, of migrations to the land of Thule, and there are references to trade, to tribute payments and to barbarians in the imperial services, but none of these can be associated with the solidi in Scandinavia without some outside evidence. As for the Scandinavian literary sources, it must be remembered that these date from a much later period than the coins and there are substantial difficulties in the interpretation and dating of the sagas.

Similarly, the archaeological remains which undoubtedly show evidence of contact between Scandinavia and one or more areas on the Continent, do not and cannot indicate whether or not the solidi are associated with any of these contacts. Archaeological excavations in Scandinavia, on the other hand, are helpful in providing an answer to the question of why the hoards were buried and it is only in this area that any agreement at all has been reached.

For all other questions, the coins themselves are the only possible source of information and thus far the results of such studies have been inconclusive. In my opinion, it is a matter of methodology and the coins can be expected to provide more definite facts if utilized to their full extent. In this study the coins have been given a closer scrutiny, including a die study which had never been made, and the results have not been without significance. Hitherto unsuspected patterns and relationships have been revealed and new facts discovered which provide a strong basis for a reinterpretation of the solidi.

New finds can always be expected to occur and one can only interpret what is presently available. Since the solidi were first studied new finds have affected the totals for a given area from time to time but they have not significantly changed the type of material found in a particular place. For example, the coin material on Öland breaks off soon after the reign of Leo, much earlier than on either Gotland or Bornholm and this fact was apparent in Hildebrand's time just as it is today. It would be unusual for the pattern on Öland or any other area to be changed significantly by future finds. Nevertheless, it is possible that new finds will warrant a revision of the conclusions presented here. It should be understood that the material available *today* is the basis for the analysis which follows and it is believed that the interpretation presented here is substantiated by this material.

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## FINDS

The nature of the bulk of the finds indicates that they are hoards; that is, the private wealth of an individual buried in the ground for safekeeping. This is true whether the find consists of one coin or many coins. A single gold solidus would represent a cherished possession and its loss would not very likely go unnoticed.<sup>1</sup>

The solidi are most commonly found in a field as a result of digging or plowing. In a few instances a note is recorded in the archives that the find was made near or under a stone or some such marked spot (Find Nos. 2, 50, 76, 87, 113a, 113c, 135, 136, 157 and 219) and in two cases the remains of a purse were discovered with the coins (Nos. 115 and 137b). Two finds were recovered in the course of archaeological excavations (Nos. 8 and 205), two are from grave mounds or tumuli (Nos. 1 and 12), two from gravel-pits (Nos. 18 and 156b), nine from on or near the sites of known prehistoric house foundations (Nos. 68, 75, 118c, 177, 204, 205, 210, 215a and 218), one during demolition of the old castle at Kalmar (No. 19e) and one from a hoard of Viking coins (No. 37). But for the most part it is safe to assume that the coins are hoards deposited in the ground for possible later recovery although two may be grave burials and a few single finds may have been stray coins.

In many cases, a multiple find has been reconstructed from two or more separate finds occurring in the same field. The Migration Age sites remained undisturbed for centuries but since their reoccupation in modern times the fields have been plowed and cultivated over and over again. During the course of this activity it is to be expected that many of the hoards would be broken up and dispersed over a field to be discovered piecemeal later. Such reconstructed finds are Nos. 2, 42, 46b, 62, 63, 72, 80a, 85, 86, 87, 99, 112, 115, 122, 130b, 137b, 147, 156a, 158, 166, 176, 178, 179a, 188, 194, 204, 215a and

<sup>1</sup> Although a single gold coin can be called a hoard by the fact of its deposit in the earth, this term is generally applied to a multiple find. See pp. 151 ff., for a discussion of such hoards.

219.<sup>2</sup> Other finds are possibly part of other deposits but information is lacking on the exact place of the finds.

Commonly found with the coins are gold or electrum objects in the form of bars, spiral rings, finger rings, arm bands, buttons, bracteates and the like (Find Nos. 3, 5, 6, 13, 20a, 23, 24, 49, 50, 53, 67, 68, 75, 79, 81, 86, 90b, 110c, 113a, 122, 130b, 135, 140, 156a, 169, 176, 184, 193, 194, 203, 212, 214a, 215a and 218). Silver objects and second century denarii occasionally appear also (Find Nos. 50, 86, 122, 130b, 136, 151, 153a, 156b, 177 and 178) and three finds contain bronze objects (Nos. 122, 156b and 178). A faience bead is included in No. 130b which also has gold and silver objects.

In addition to these gold objects found with coins, there is a great mass of gold found in Scandinavia without coins. The Swedish mainland, particularly Västergötland and Södermanland, is far richer in this type of gold find than the Baltic islands where most of the solidi are found. It is presumably from the same period as the solidi but its relationship to the solidi activity has not been determined.<sup>3</sup>

The coin finds are concentrated on the Baltic islands of Gotland, Öland and Bornholm with a sizable number from Mainland Sweden and only a few from the remaining Danish territory. Öland has the largest number of finds and also the greatest number of

<sup>2</sup> It cannot be certain, in every case, that finds made in a more or less restricted area over a period of time were originally part of one deposit. The probability is great that they were but it is well to bear in mind the circumstances of their discovery. For all these reconstructed finds I have depended on information in the archives of the SHM or on information provided by Montelius, Stenberger, Nerman, et. al. in their publications. These multiple finds become important for the purpose of dating the deposits. See pp. 151 ff. on the hoards. Only those finds consisting of five or more solidi are considered as hoards in that chapter and it is only with these hoards that the factor of several separate finds being considered as one hoard becomes important. Moreover, there is not a single hoard of which we can be certain that every coin originally part of the deposit has been recovered. Although in two cases, traces of a container of leather or some other material were present, the container itself has disintegrated and the coins more or less scattered in the soil.

<sup>3</sup> Janse, op. cit., includes figures on the fineness of the gold of a large number of the gold objects found in Sweden. It is of interest that the coins are uniformly of 90 percent or higher purity while the bracteates and other gold items vary considerably in purity, some running as low as fifty per cent. See conclusions, p. 172.



solidi:<sup>4</sup> 303 coins from 131 finds of which 52 per cent (158 coins) occur in 7 hoards of five or more coins. On Gotland, there are 252 coins from 96 finds with 10 hoards accounting for 63 per cent (159 coins) of the total. Bornholm has 150 coins, 39 separate finds and 6 hoards totalling 109 coins or 73 per cent of the total. Mainland Sweden has produced 142 coins from 44 finds with 4 hoards totalling 101 coins or 71 per cent of the total. The remaining Danish territory has yielded only 31 coins from 18 finds with 2 hoards totalling 13 coins or 42 per cent of the total.

On Öland the coins are distributed over the entire island from the northern tip to the southern part but concentrations are noted at various points. More than half of the solidi are found in the south central part of the island in the parishes of Algutsrum, Norra Möckleby, Torslunda, Sandby and environs. Another accumulation north of this, around the parishes of Löt, Köping, Bredsätra and Gärdslösa, is notable and together these two areas account for about three-quarters of the total number of coins on Öland. There is a slight accumulation in the very northern part of the island in the parishes of Böda and Högby and the remainder of the finds, single and multiple, are spread over the other areas.

The distribution on Gotland is similar in many respects. Two accumulations are found: one centering around Akebäck, Eskelhem and Vänge—an area which has yielded six hoards—and a second concentration to the east and south of this, around Etelhem. The latter area is important mainly for the hoard of Botes (Find No. 137b) which contains 82 coins but there is one other hoard of 7 coins and several smaller finds as well. The two areas account for slightly more than three-quarters of the total coins on Gotland. Otherwise, solidi are found in almost all other parts of the island as far south as Grötlingbo and as far north as Rute. The finds are always inland and this is true of the other areas also. Archaeological excavations on the Baltic islands have shown that the Migration Age settlements were invariably inland.<sup>5</sup>

<sup>4</sup> These figures are based on the find-list (Table C, p. 109; the five coins from Sweden, provenance unknown (Find No. 183) have been excluded. The number of finds is not particularly significant since several single finds may originally have been part of one deposit.

<sup>5</sup> Nerman, *Gotland*; Stenberger, *Öland*; Klindt-Jensen, *Bornholm*.

Finds from the Swedish mainland are for the most part located at various points, just inland, along the Baltic coast. Half of the 142 coins come from the Mälaren area around Stockholm where two of the hoards were found. The two other hoards were found near the coast in Lofta parish in Småland and in Hörup parish in Skåne.

The Bornholm finds show a particular accumulation at the eastern tip of the island around Svaneke, but inland, where 63 of the 150 coins have been found. A large hoard of 36 solidi came from the southern part of the island at Soldatergård and the Kåsbygård hoard of 14 coins is from western Bornholm. For the rest of Denmark there are mostly single finds from Jutland, Zealand and Fyen, but two hoards, both from Fyen, are also recorded.

The earliest solidi appearing in the hoards are of Honorius and Arcadius and the latest of Justinian I.<sup>6</sup> The solidi of western emperors (A.D. 395-476) total 188 coins including 23 known imitations and those of eastern emperors (A.D. 395-565) number 559 with 73 imitations.<sup>7</sup> The proportion of coins of eastern emperors to western emperors is then almost 3:1. Some of the coins of eastern emperors bear western mint marks, however, and moreover, the chronological differences in the lengths of the eastern and western regimes distort the ratio; the western empire ended in 476 but coins of the eastern emperors continued to arrive in Scandinavia for another 75 years. Taking into consideration the issuing mint and the period involved, the actual number of eastern and western coins is as follows:<sup>8</sup>

<sup>6</sup> Some fourth century solidi are found in Scandinavia also, but these cannot be considered part of the fifth-sixth century activity for the earlier solidi never appear in the same hoards with the later coins. Furthermore, the fourth century coins are concentrated in western Scandinavia, primarily on Jutland, with only a few pieces in eastern Scandinavia where our solidi are found.

<sup>7</sup> In addition, there are 10 uncertain imitations, 1 Merovingian solidus of Theodebert and 1 Merovingian triens in the name of Justinian, the only triens to be found in Scandinavia from this period. The figures are based on the catalogue (Table D, p. 110).

<sup>8</sup> For the first period, all western emperors are included and all eastern emperors through Basiliscus but excluding Zeno. The second period covers the eastern emperors from Zeno to Justinian I and contemporary issues, official or barbaric, in the West. Not included are the two Merovingian coins and the 10 uncertain imitations. See Table E, p. 111.

## A.D. 395–476

297 coins from eastern mints

216 coins from western mints (including COMOB issues)

41 imitations, some of which may belong to a later period but which are imitations of emperors of this period

## A.D. 476–565

122 coins from eastern mints

71 coins from western mints, most of which are imitations but which include some official western issues also

Of the individual emperors, Leo I, Theodosius II, Anastasius, Zeno and Valentinian III are represented by the greatest number of solidi. All had long reigns and extensive coinages but if we divide the total number of coins for each emperor by the length of reign, a yearly average of coins represented in Scandinavia for each emperor is obtained. Table A (p. 106) shows that Leo of the eastern emperors and Libius Severus of the western emperors have the highest annual representation. The figures for the very short-reigned emperors are misleading and the coins of Glycerius, Julius Nepos and Romulus Augustus have been averaged together for the three and a half year period of their collective reigns. It is apparent, however, that from the period of Leo I (457–474) and his contemporaries in the West, Majorian and following, there are the greatest number of solidi.

The figures for Arcadius and Honorius, the earliest emperors, are slight and indicate that the stream did not begin as early as their reigns. They are considerably higher for Honorius who reigned until 423 than for Arcadius whose reign ended in 408. It is generally acknowledged that in antiquity coins continued to be circulated long after the date of issue though in decreasing quantity. If the import had begun as early as the time of Arcadius and Honorius we should certainly expect coins of the fourth century to be included also. Valentinian III and Theodosius II show increases over Honorius and Arcadius and a peak is reached in the period 457–476. The activity levels off under Zeno and declines progressively until it ceases completely under Justinian I.

Grouping the eastern and western emperors in more or less corresponding periods gives the general pattern of importation (Table B, p. 107), while the graph (p. 108) illustrates the proportionate representation of eastern and western issues for the same six periods. Eastern issues are considerably more numerous than western through the reign of Zeno. Under Anastasius the annual representation drops again but the decline is restricted to eastern issues while western issues show a slight increase. The annual representation for Justin and Justinian is very slight and the proportion of eastern and western issues is of no significance.

Of the various mints represented (Table E, p. 111) the most important is Constantinople with 395 coins. Thessalonica is represented by 23 solidi and there is a single specimen from Antioch, the Leontius piece. In the West, Ravenna is the most common mint with 79 solidi; Rome has 45, Milan 44 and Arelate 3. Some 61 other coins are identified as western but have no distinguishing mark other than COMOB to identify the mint.

Coin totals for the various areas within Scandinavia (Tables C and D, pp. 109-10) indicate that Öland and Gotland were the most important recipients of this gold. The import to Öland was very much diminished after the time of Leo however and coins later than Zeno are practically non-existent. Thus it is important to show statistics for all the areas for two periods as was done with the eastern and western issues above.<sup>9</sup>

	Öland	Gotland	Bornholm	M. Sweden	Denmark
A.D. 395-476	293	119	110	74	22
A.D. 476-565	10	133	40	48	9

In the first period, Öland's 293 solidi almost equal the total of the other areas together (325) and in the second period, Gotland's 133 coins more than equal the total of the other areas combined (107) indicating clearly the respective importance of Öland and Gotland in the two periods.

<sup>9</sup> The chronological division is the same as that made on page 103, n. 8, but these figures are based on the find-list (Table C, p. 109). The 20 uncertain coins from Mainland Sweden and the 5 coins from Find No. 183, Sweden, provenance unknown, have been excluded.

TABLE A: ANNUAL REPRESENTATION BY EMPEROR<sup>10</sup>

	<i>Years of reign</i>	<i>Total coins</i>			<i>Annual Average</i>		
	(ca.)	E	W	T	E	W	T
Honorius*	28	4	17	21			.75
Valentinian III*	30	2	57	59			2.00
Majorian*	4		16	16	4.00		4.00
Libius Severus*	4		31	31	7.75		7.75
Anthemius	5		23	23	4.60		4.60
Glycerius	3 1/2		3	3			
Julius Nepos*			8	8	4.28		4.28
Romulus Augustus			4	4			
Arcadius	13	1	4	5			.38
Theodosius II*	42	98	44	142	2.33	1.00	3.38
Marcian*	7	26		26	3.71		3.71
Leo I*	17	154	7	161	9.06	.41	9.47
Leo II/Zeno		5		5			
Zeno	15	58	16	74	3.87	1.07	4.93
Basiliscus (B/Marcus)		7	2	9			
Leontius		1		1			
Anastasius	27	47	45	92	1.74	1.67	3.41
Justin I	9	5	4	9	.55	.44	1.00
Justinian I	38	11	6	17	.29	.16	.45

\* Imitations not included since they are not known to be contemporary.

<sup>10</sup> The figures are based on the catalogue; see Table E, p. III.

TABLE B: ANNUAL REPRESENTATION BY PERIOD

			<i>Total coins</i>		<i>Annual Average</i>		
			E	W	E	W	T
I	395-455/7		131	122	2.18	2.03	4.22
	Honorius	Arcadius					
	Valentinian III	Theodosius II					
		Marcian					
II	457-476		166	94	8.74	4.95	13.68
	Majorian	Leo I					
	Libius Severus	Leo II/Zeno					
	Anthemius	Basiliscus					
	Glycerius	(B/Marcus)					
	Julius Nepos						
	Romulus Augustus						
III	476-491		59	16	3.93	1.07	5.00
	Zeno						
	Leontius						
IV	491-518		47	45	1.74	1.67	3.41
	Anastasius						
V	518-527		5	4	.55	.44	1.00
	Justin I						
VI	527-565		11	6	.29	.16	.45
	Justinian I						

## ANNUAL REPRESENTATION BY PERIOD

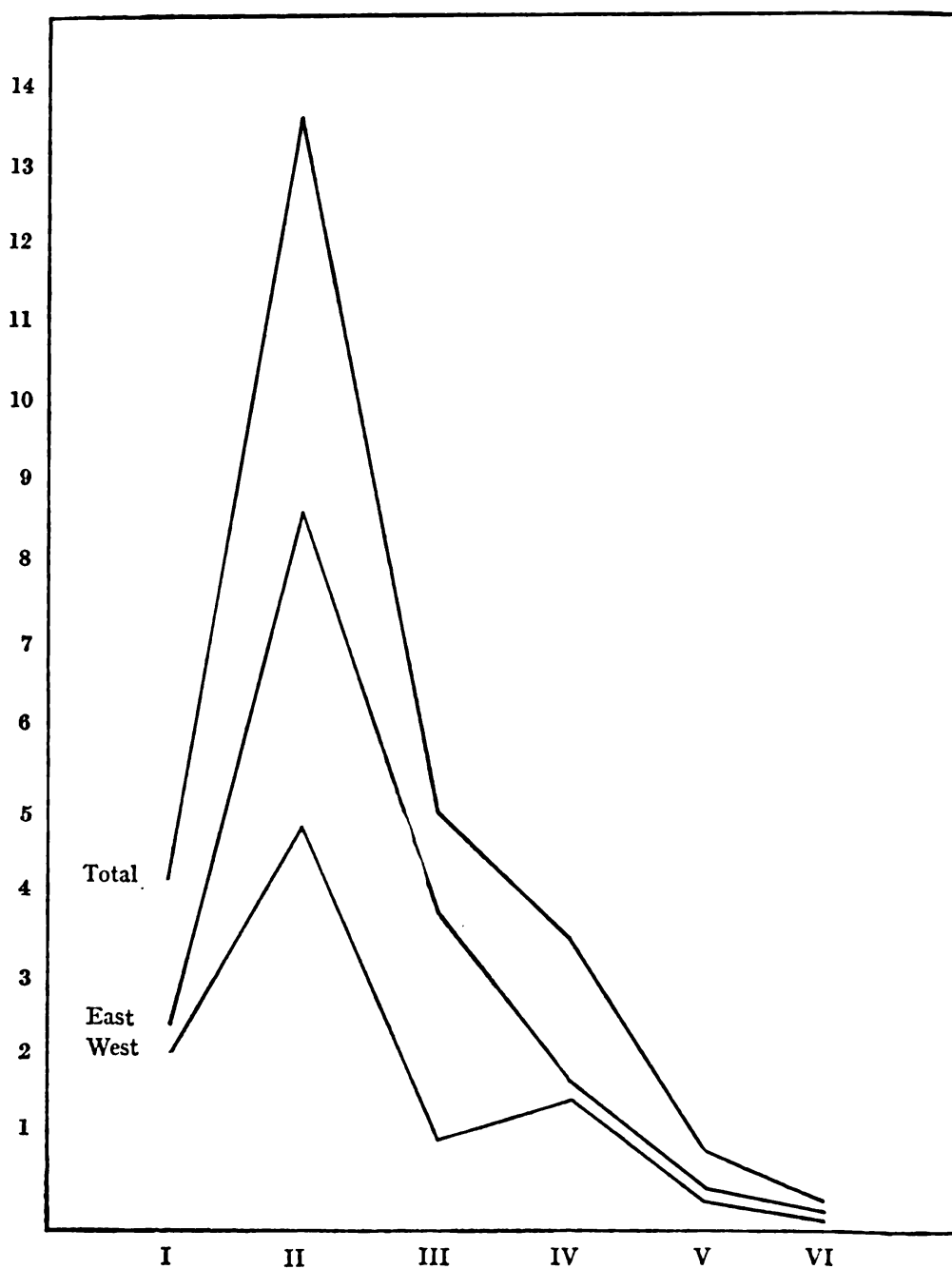


TABLE C: DISTRIBUTION OF FINDS BASED ON FIND-LIST\*

	MS	Ö	G	S	B	D	TOTAL
Honorius	2	13	14	1	5		35
Valentinian III	4	43	8		14	4	73
Honorius					1		1
Majorian		12	5		1	1	19
Libius Severus	1	26	2	1	6	2	38
Anthemius	2	16	4		6		28
Glycerius		2			1		3
Julius Nepos	4×	2	2		1	2	11×
Romulus Augustus	1	3					4
TOTAL	14×	117	35	2	35	9	212×
Arcadius	1	3	1				5
Theodosius II	33	68	28	1	40	3	173
Eudocia		2					2
Placidia		1					1
Pulcheria		2					2
Marcian	4	16	7	1	2	1	31
Leo I	18×	80	44	1	31	8	182×
Leo II/Zeno		3	1			1	5
Zeno	27×	7	31		26	1	92×
Ariadne			1				1
Basiliscus	4	1	2		1		8
B/Marcus			1		1		2
Leontius					1		1
Anastasius	16×	1	74		9	4	104×
Justin I		1	8		1		10
Justinian I	1	1	14			2	18
TOTAL	104×	186	212	3	112	20	637×
Merovingian			1			1tr	2
Uncertain	4		4		3	1	12
Imitations	(20×)						(20×)
GRAND TOTAL	142	303	252	5	150	31	883

MS = Mainland Sweden; Ö = Öland; G = Gotland; S = Sweden, find-place unknown; B = Bornholm; D = Denmark, west of the Sound.

\* Imitations included in figures.

× Unspecified coins from Find No. 26.



TABLE D: DISTRIBUTION OF FINDS BASED ON CATALOGUE<sup>11</sup>

	MS	Ö	G	S	B	D	TOTAL
Honorius	2	9	13	1	3		28
Valentinian III	4	40	8		12	4	68
Honorina					1		1
Majorian		10	5		1	1	17
Libius Severus	1	23	2	1	5	2	34
Anthemius	2	12	3		6		23
Glycerius		2			1		3
Julius Nepos	3	2	2		1	2	10
Romulus Augustus	1	3					4
TOTAL	13	101	33	2	30	9	188
Arcadius	1	3	1				5
Theodosius II	22	65	26	1	36	3	153
Eudocia		2					2
Placidia		1					1
Pulcheria		1					1
Marcian	3	14	7	1	1	1	27
Leo I	16	69	41	1	28	8	163
Leo II/Zeno		3	1			1	5
Zeno	14	6	28		24	1	73
Ariadne			1				1
Basiliscus	4	1	1		1		7
B/Marcus			1		1		2
Leontius					1		1
Anastasius	12	1	68		7	4	92
Justin I		1	8				9
Justinian I		1	14			2	17
TOTAL	72	168	197	3	99	20	559
Merovingian			1			1tr	2
Uncertain	2		4		3	1	10
Imitations							
GRAND TOTAL	87	269	235	5	132	31	759 <sup>12</sup>

MS = Mainland Sweden; Ö = Öland; G = Gotland; S = Sweden, find-place unknown; B = Bornholm; D = Denmark, west of the Sound.

<sup>11</sup> Imitations are included in the figures; the 47 coins from Find No. 6 (Lillön, Ekerö, Mainland Sweden) are included here as a Mainland find but see pp. 120–22 for a discussion of this hoard which, in all probability, was formed on Gotland.

<sup>12</sup> The total is of the 726 coins (including one triens) which still exist and 33 others for which complete descriptions are available in the literature. The remaining 124 coins have been dispersed or were deposited in the collections at an early date without record of their find-place.

TABLE E: DISTRIBUTION OF COINS BY MINT\*

	CPL	THESS	ANTIOCH	TOTAL EAST	ARLES	MILAN	ROME	RAVENNA	COMOB	IMITATIONS	TOTAL WEST	GRAND TOTAL
Honorius	3	1		4	2			15		7	24	28
Valentinian III	2			2	4	16	35	1	10		66	68
Honorina								1			1	1
Majorian					3	7		6		1	17	17
Libius Severus					6	16	9			3	34	34
Anthemius					8	9	4	2			23	23
Glycerius					1		2				3	3
Julius Nepos					4	2	2			2	10	10
Romulus Augustus					4						4	4
<b>TOTAL</b>	<b>5</b>	<b>1</b>		<b>6</b>	<b>3</b>	<b>36</b>	<b>43</b>	<b>74</b>	<b>3</b>	<b>23</b>	<b>182</b>	<b>188</b>
Arcadius	1			1	2	1	1				4	5
Theodosius II	89	6		95					43	15	58	153
Eudocia	2			2								2
Placidia								1			1	1
Pulcheria	1			1								1
Marcian	24	2		26						1	1	27
Leo I	144	10		154	2	1	3	1	2		9	163
Leo II/Zeno	5			5								5
Zeno	54	3		57	2			14			16	73
Ariadne	1			1								1
Basiliscus	5			5	2						2	7
B/Marcus	2			2								2
Leontius			1	1								1
Anastasius	46	1		47						45	45	92
Justin I	5			5						4	4	9
Justinian I	11			11						6	6	17
<b>TOTAL</b>	<b>390</b>	<b>22</b>	<b>1</b>	<b>413</b>	<b>8</b>	<b>2</b>	<b>5</b>	<b>58</b>	<b>73</b>		<b>146</b>	<b>559</b>
Merovingian & Uncertain Imitations										12	12	12
<b>GRAND TOTAL</b>	<b>395</b>	<b>23</b>	<b>1</b>	<b>419</b>	<b>3</b>	<b>44</b>	<b>45</b>	<b>79</b>	<b>61</b>	<b>108</b>	<b>340</b>	<b>759</b>

\* Based on catalogue.

## IDENTICAL DIES

The Scandinavian solidi have been examined for identical dies. It was believed that such a study would contribute evidence concerning the nature of the activity and whether the coins were introduced over a period of time or *en bloc*. The absence or presence of identical dies may indicate the extent to which the coins had circulated before arriving in Scandinavia, for presumably coins struck from the same dies arrived together and traveled to Scandinavia soon after being issued.

The earliest die identities appear among the coins of Valentinian III and Theodosius II of whom there are seven and eight coins respectively struck from identical dies (Table F, p. 115).<sup>1</sup> Of Libius Severus with 16 coins and Leo I with 33 coins there are the greatest number of die identities. These numbers do not imply that 16 coins of Severus, for example, bear the same die, but that each of the 16 shares a die with at least one other coin. In the case of Leo, as many as 5 coins may be from the same die, but generally only two coins show identical dies.

For the remaining emperors, there are 2 coins with identical dies of Majorian, 6 of Anthemius, 2 Glycerius, 2 Julius Nepos, 3 Romulus Augustus, 13 Zeno, 18 Anastasius (of which 10 are Ostrogothic and 2 uncertain imitations) and 2 Justinian I. In addition there are 6 imitations of Honorius, 3 of Theodosius II and 2 of uncertain attribution.<sup>2</sup> Only Honorius of the western emperors is not represented by die identities while in the East, Arcadius, Marcian, Leo II/Zeno, Basiliscus/Marcus and Justin I are without them.<sup>3</sup> These 123 coins with

<sup>1</sup> Imitations of Honorius also include some die identities but they are considered later than his reign for the reasons noted above, p. 9, and below, p. 122.

<sup>2</sup> The imitations of Anastasius are known to be contemporary with that emperor and thus are included with the official issues of Anastasius. Those of Honorius and Theodosius II, however, are known to be later than the respective reigns and have to be considered separately.

<sup>3</sup> The empresses and Leontius, also, are without die identities but most of these are represented by one coin only.

identical dies, identified from a total of 726<sup>4</sup> coins available for the die study, give a ratio of ca. 6:1 for the entire series.

The absence of identical dies among the coins of Arcadius and Honorius, together with the small number of coins of these emperors, strengthens the premise that the import began well after their reigns. Their coins would continue to be circulated though in gradually decreasing volume. For Valentinian III and Theodosius II there are a few die identities although the representation of their coins in Scandinavia is not very high considering the length of their reigns. This fact, together with relatively few die identities, suggests the end of their reigns for the beginning of the stream. In support of this is the evidence that six of the eight coins of Theodosius II with identical dies belong to one of his latest datable issues, the IMP XXXXII COS XVII issue of 443.<sup>5</sup> Coins of earlier issues are present too, although there is only one pair of identical dies (the VOT XXX MVLT XXXX issue of ca. 430) and the earlier issues are less numerous, all of which suggests the very end of Theodosius' reign or shortly after his reign for the beginning of the stream.<sup>6</sup>

The greatest number of identical dies is found among the coins of Leo I and Libius Severus who also have the highest annual representation of coins in Scandinavia. The reign of Libius Severus (461–465) falls within that of Leo (457–474) and surely indicates that a vast import of solidi occurred at this time.

After Leo, identical dies continue to be common among western issues, notably those of Zeno and Anastasius, but decline among eastern issues. This fact, together with the change in the proportionate representation of eastern issues noted under Anastasius (see p. 105), indicates a different and less productive source of solidi after Zeno.

It is noteworthy that the ratio of coins and identical dies (see Table G, p. 116) roughly parallels the pattern of annual representation (Table B, p. 107). The periods with the greatest number of coins are also the periods with the highest proportion of identical dies. Both patterns reveal the date for the beginning of the stream

<sup>4</sup> The catalogue consists of 759 coins but of these, 33 are known by description only.

<sup>5</sup> Only one issue is later; Boyce, *op. cit.*, 135 notes a very rare solidus of Theodosius with the legend IMP XXXXIII COS XVIII (A.D. 445–446).

<sup>6</sup> See conclusions, pp. 163 ff.

and the peak of importation as well as a change in the source of the solidi in the declining years of the activity. But the identical dies reveal further factors of importance.

The ratio of identical dies is greater on the whole for the western issues than for the eastern, partly because those issues were less extensive and the chances for die identities among them accordingly greater. Nevertheless, it is perhaps significant that all western emperors after Honorius are represented by identical dies, while of the eastern emperors, some of whom had equally short reigns and limited issues, several are without them. The western emperors from Majorian to Romulus Augustus are roughly contemporary with Leo I who, of the eastern emperors, has the highest annual representation and also the highest proportion of identical dies. The reigns of Leo II/Zeno and Basiliscus, however, are also within this period and they are not represented by identical dies. Leo of the eastern emperors represents a special case as does Theodosius. Both had long reigns with extensive coinages and die identities among these coins are particularly significant. After Leo the official eastern coins decrease in number and die identities are scarce; western imitations or official western issues are also less numerous but the ratio of identical dies among these is much higher proportionately than among contemporary eastern issues in comparison with the ratio evident from 457-476, and beginning in the reign of Anastasius eastern issues are decreasingly represented in proportion to the earlier ratio.

It is apparent, therefore, that up to about 476 the bulk of the solidi consists of official issues of Theodosius II and Leo I and the great number of die identities, particularly of Leo, indicates direct payments. These were supplemented by a steady flow of solidi from the West which perhaps also indicates payments, but in any event, direct contact with Italy. Zeno's reign represents a transitional stage, for the annual representation declines but the decline in the ratio of identical dies is noticeably sharper among the eastern issues than the western. Starting with Anastasius, western issues, for the first time since the import began, are about equal in number to the eastern issues.

That the die identities are found predominantly among western issues indicates direct contact with Italy from the time the import

began until it ended, while contact with the East is evident for only the first part of this period. It is very much apparent under Leo but starting in the reign of Zeno it becomes less and less the case. And though the intensity of the stream is in decline at the same time, the West is clearly the primary source of the solidi after 491 while before that time both East and West are involved.

TABLE F: RATIO OF COINS AND IDENTICAL DIES BY EMPEROR<sup>7</sup>

	No. coins		No. ID		Ratio Coins: ID	
	E	W	E	W	E	W
Honorius*	4	17				
Valentinian III*	2	57		7		8:1
Majorian*		16		2		8:1
Libius Severus*		31		16		2:1
Anthemius		23		6		4:1
Glycerius		3		2		1.5:1
Julius Nepos*		8		2		4:1
Romulus Augustus		4		3		1.3:1
Arcadius	1	4				
Theodosius II*	98	44	6	2	16:1	22:1
Marcian*	26					
Leo I*	154	7	31	2	5:1	3.5:1
Leo II/Zeno	51					
Zeno	58	16	5	8	11.5:1	2:1
Basiliscus	7	2				
(B. Marcus)	2					
Leontius	1	4				
Anastasius	47	45	6	12	8:1	3.75:1
Justin I	5	4				
Justinian I	11	6	2		5.5:1	

\* Imitations not included since they are not known to be contemporary.

<sup>7</sup> Figures based on catalogue (Table E, p. 111).

<sup>8</sup>

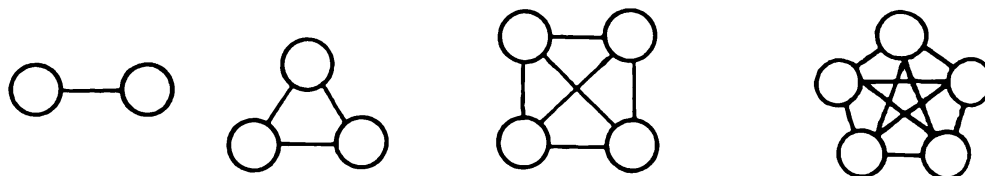
TABLE G: RATIO OF COINS AND IDENTICAL DIES BY PERIOD

	No. coins		No. ID		Ratio Coins: ID	
	E	W	E	W	E	W
I 395-455/7	131	122	6	9	22:1	14:1
II 457-476	166	94	31	33	5:1	2.8:1
III 476-491	59	16	5	8	12:1	2:1
IV 491-518	47	45	6	12	8:1	3.75:1
V 518-527	5	4				
VI 527-565	11	6	2		5.5:1	

Thus, the solidi in Scandinavia seem to fall into three different categories: (a) direct payments from the emperors, particularly Leo I, (b) coinage issued by Italian mints from the 450s to the time of Justinian I and (c) coinage in general circulation during this period—coins of Honorius, Arcadius, early coins of Valentinian and Theodosius as well as later eastern coins which do not reflect direct payments. Such a composition is of importance for determining the carriers of the solidi and the nature of the activity.

In addition to the statistical data provided by the identical dies, their distribution in the Scandinavian finds is informative. Chart A (p. 125) shows the distribution for the entire period, the circles representing the geographical areas (Mainland Sweden, Öland, Gotland, Bornholm and Fyen), the numbers within the circles indicating the number of die links<sup>8</sup> which occur there, and the numbers on the lines

<sup>8</sup> The term die link is used here to refer to two coins bearing the same die, obverse or reverse and, in some cases, both. On Charts A—E (pp. 125-29), the number of *links*, not the number of coins involved, has been illustrated. They have been computed as follows: 2 coins from the same die or dies—1 link; 3 coins from the same die(s)—3 links; 4 coins from the same die(s)—6 links; 5 coins from the same die(s)—10 links.



No special consideration has been given to those instances in which both obverse and reverse dies are the same, although these cases are more significant.

drawn between the circles indicating the number of die links between the two areas.<sup>9</sup>

The prominence of Öland is immediately apparent. Not only do the greatest number of links by far occur within this island but also the greatest number of contacts between any two areas involves Öland. Only Gotland is at all comparable with 16 links within the island and contact with Mainland Sweden and Bornholm as well as with Öland. The conclusion that the solidi arrived at Öland first and from there were distributed to the other areas is highly probable.

Further information is revealed by breaking the chart down, reign by reign (see Chart B, p. 126). The pattern of Öland's prominence continues to the reign of Zeno. From Valentinian III through Romulus Augustus of the western emperors and from Theodosius II through Leo I of the eastern emperors, the die links are within Öland or between Öland and another of these areas. Beginning with Zeno die links are found within Gotland and the contact is with Mainland Sweden in one instance and with Bornholm in three. In the reign of Leo there is a precedent for this change and one link between Gotland and Bornholm is found. This pattern merely confirms the information already to be had from the table on page 109 which shows a drop from 80 coins of Leo to 7 of Zeno on Öland. Three single finds of Anastasius, Justin I and Justinian I also occur on Öland but the hoard evidence indicates that the import ended about 476/77.<sup>10</sup> Up till that time Öland was the receiving station for the solidi and from Öland the coins found their way to Gotland, Bornholm and the other areas. The total number of coins from this period (up to Zeno) supports this, for Öland has 293 compared with 119 from Gotland, 110 from Bornholm, 74 from the Swedish mainland and 22 from the remaining Danish territory.

When destructive forces overcame Öland,<sup>11</sup> the stream was directed to Gotland which then became the receiving and distributing center. This is evident from the distribution of the die links and also from

<sup>9</sup> The recently discovered hoard of Lillön, Ekerö sn. (Find No. 6) is not included in the discussion of Charts A and B; however, it is dealt with below, pp. 120-22.

<sup>10</sup> See discussion of hoards, pp. 151 ff.

<sup>11</sup> See discussions of the literature, hoards and the conclusions.



the total number of coins for the period. From 476–565 Gotland's finds total 133, Öland has 10, Bornholm 40, Mainland Sweden 48 and Denmark, west of the Sound 9.<sup>12</sup>

Öland's primacy is firmly established by the pattern of die links and by the number of coins for the period up to about 476 and Gotland's primacy is equally evident after this, but it would also appear that the coins in each period were received and dispersed from one or more centers on Öland and Gotland. In Find No. 99 on Öland (Åby, total 80 coins) there are 20 coins bearing identical dies which reveal 10 links with other Öland finds, 3 with Gotland, 2 with Mainland Sweden and 14 within the hoard. The latter are particularly significant for they surely indicate that the coins on Öland were cleared through Åby. The hoard also includes one set of five coins of Leo from the same obverse die, all in fine condition, which probably represents one of the latest shipments which had not yet been dispersed at the time of the deposit of the hoard.

Another hoard on Öland, No. 115 from Björnhovda (total, 36 coins), has revealed 6 die links with Öland finds and is perhaps a secondary distributing center. Although the number of die links can be attributed to the size of the hoard, there are two coins of Libius Severus, from a set of four coins with the same obverse and reverse dies, in the hoard. Outside of Öland, No. 115 has one die link with Mainland Sweden and one with Bornholm.

On Gotland, Find No. 137b from Botes with 82 coins is of comparable size to No. 99 on Öland. There are 9 links between this hoard and other Gotland finds and 2 within the hoard which account for all but 5 of the die links within Gotland. Here, too, the number of die links could be attributed merely to the size of the hoard were it not for the two sets of die links within the hoard. Of these, one set of two coins is linked with two other Gotland finds and the second is linked with one other Gotland find. The evidence that Botes was a distribution center on Gotland is less apparent than that for Åby on Öland. In the period of Gotland's supremacy, however, the ratio of identical dies had fallen sharply and although the process of distribution was

<sup>12</sup> Even though Gotland was receiving coins during the reigns of Justin I and Justinian I, and the other areas were not, the number of coins from this later period is very insignificant.

probably the same in both periods, the relationship of No. 137b to the other Gotland finds is not as apparent.

Bornholm clearly played a secondary rôle in the *solidi* activity during the entire period. Nine of the ten die links which occur on Bornholm are with Öland or Gotland. The only example of a Bornholm find die-linked with another Bornholm find is No. 205 with No. 203 by a coin of Zeno. Find No. 212 with 29 coins has three die links with Öland and two with Gotland and No. 205 is linked with Öland and with another Bornholm find, the case mentioned above. The other die links are single occurrences for a particular hoard or find. Thus the evidence is overwhelming that this island received its coins from Öland up to the reign of Zeno and from Gotland after that.

The distribution of the identical dies indicates that Öland was the main receiving and distributing center of the *solidi* up to about 476. Within Öland it is also evident that Åby was a major clearing center for the *solidi*. Furthermore, die links not involving the Åby hoard do occur on Öland but no die links, independent of both Åby and Öland, occur within Gotland, Bornholm or elsewhere or between these areas during the period of Öland's primacy. If the coins arrived at Åby and from there were dispersed simultaneously in several directions, i.e., within Öland and also to Gotland, Bornholm and elsewhere, we should expect some die links to occur within these other areas or between these areas also. That they do not occur outside of Öland can only indicate that the bulk of the shipments were dispersed and circulated on Öland before reaching these other areas.<sup>13</sup> This is supported by the observation that although the majority of the die links within Öland involve Åby (24 of the 42 instances), the outside contacts are in only 5 of the 17 instances with Åby.

The process would seem to have been the same under Gotland's supremacy with Botes (No. 137b) most probably a major clearing center. With one exception, die links outside of Gotland do not occur in this period and if the coins had been dispersed from Botes to Bornholm at the same time as they were around Gotland, most certainly

<sup>13</sup> The supposition is that during circulation of these coins, sets of die identities were broken up and it would be only by chance that two coins from the same die were exported from Öland.

die links within Bornholm should also be expected. This hoard also accounts for 11 of the 16 die links within Gotland but for only one of the four foreign contacts of this period, indicating that the Bornholm coins are further removed from Botes than are the Gotland coins. Thus, the bulk of the solidi must have been dispersed on Öland and Gotland in their respective periods before being exported and if two coins with the same die were sent to the other areas after this distribution it was only by chance.

This was the apparent order of things until a newly discovered hoard from the Swedish mainland, Find No. 6 with 47 coins from Lillön, Ekerö parish, was examined for identical dies and a rather erratic pattern emerged. The Lillön hoard revealed 14 new die links from 11 coins of Theodosius II, Leo I, Zeno and Anastasius, die-linked within the hoard and with Öland, Gotland and Bornholm, and producing the scheme shown on Chart C (compare with Chart B). Such links were not apparent before from the 40 coins available from the Swedish mainland. The two other sizable hoards from that area, however, are not available for die study. If this hoard was one which was formed on the Mainland, a disconcerting pattern of die links emerges but in no way does it invalidate the earlier conclusions regarding Öland's and Gotland's respective primacies.

The new hoard has revealed no die links with other Mainland finds from which 40 coins were available for die study. In this respect it is comparable to the Bornholm coins where die links occur only between Bornholm and an outside area (with one exception), thus reflecting a similar, subordinate rôle in the solidi activity. However, the pattern of these 14 new links does not fit in with the previous one established by some 82 instances. Previously, all die links up to ca. 476 occurred on Öland or between Öland and another area, and after that date the die links are on Gotland or between Gotland and another area. Exceptions are noted with a link between Gotland and Bornholm under Leo, one between Öland and Fyen under Zeno, and one within Bornholm under Zeno. There is also a link between Öland and Bornholm under Anastasius but this transfer clearly occurred after Öland's activity had ended and is of no significance. The links involving Leo and one of the Zenos, on the other hand, occurred during the transitional period between the end of Öland's primacy

and the beginning of Gotland's. The Zeno link between Öland and Fyen could date from the period of Öland's primacy and the Leo link between Gotland and Bornholm could be from Gotland's primacy. But if not they are merely occurrences of the "chance" export mentioned above, as is undoubtedly the case with the pair of Zeno found on Bornholm.

From the Lillön hoard, die links of the time of Öland's primacy are found within Mainland Sweden, between the Mainland and Gotland, and between the Mainland and Bornholm with only one link with Öland when presumably all coins were cleared through that island and non-Öland die links do not occur. From the period of Gotland's primacy, five links occur between Mainland Sweden and Bornholm and one within Mainland Sweden. It is possible that sets of die identities from Öland in the early period, and from Gotland later, were dispersed to Mainland Sweden before they became separated on their respective islands. This did not happen before, however, with the exception of those cases discussed above and thus, the addition of 9 new instances, all involving *one* hoard requires some other explanation.

It is more likely that this hoard was originally formed on Gotland and was transferred to Uppland. If coins of Justin and Justinian had been included this would most certainly have been evident. As it is, five of Gotland's 10 hoards close with Anastasius and 4 are later (2 with Justin I and 2 with Justinian I).

The die links of the Lillön hoard are with Gotland in 5 instances and Bornholm 6; one other is with Öland and two are within the hoard. Three of the Gotland links are with Find No. 137b which is the most prominent Gotland hoard both in size and number of die links and, also, most of its links are within Gotland.

Adding Lillön's die links to the chart as a Gotland hoard, the pattern shown on Charts D and E emerges. In most cases the previous pattern is strengthened. An exception is noted in the two sets of die identities of Theodosius II which are found on Gotland and without apparent connection with Öland. There is also an additional example of a link between Gotland and Bornholm in the reign of Leo but this has little significance since it is during the transitional period between the primacy of Öland and that of Gotland.

Reviewing the facts: The size of the Lillön hoard is unique for Mainland Sweden;<sup>14</sup> the identities are numerous yet have no links with any of the 40 Mainland Sweden coins available for the die study; the distribution of the die links is erratic in view of the pattern established by 82 die links of the other coins. None of these factors by themselves warrants a revision of earlier conclusions regarding Öland's primacy, followed by that of Gotland's, but all elements fit precisely into the pattern of the Gotland coins and it seems most probable to me that this hoard was originally formed on that island and was transferred to Mainland Sweden.

Still other aspects of the identical dies are of interest. With the pattern evident from Chart B showing that die links between Gotland and Bornholm or within either of these two islands do not occur during the period of Öland's primacy (up to ca. 476) it is evident that the imitations of Honorius, Theodosius II and those of uncertain attribution which appear die-linked on Gotland or between Gotland and Bornholm, must have been introduced during the period of Gotland's primacy. The date can be restricted further. Two of the sets of die links (Nos. 22–23 and 750–751) are associated with hoards from Bornholm where the import seems to have ended in the reign of Anastasius,<sup>15</sup> while the two remaining sets (Nos. 24–27 and 340–342) can in no case be later than the reign of Justin because of hoard evidence.<sup>16</sup> Moreover, most of these imitations are worn which would indicate an even earlier date. Thus their introduction to Scandinavia can be roughly estimated as between 480 and 510. The date of their manufacture is more flexible. In the catalogue these imitations of Honorius and Theodosius were shown to have been manufactured later than those reigns<sup>17</sup> and the uncertain imitations occurring with identical dies, after 430.<sup>18</sup> Since they could not have been introduced to Scandinavia before ca. 480, however, the date of their manufacture must be considered closer to this period.

<sup>14</sup> Two other hoards of 21 and 24 coins are recorded but only 3 coins of the first (Find No. 5) and one coin of the second (Find No. 26) are available.

<sup>15</sup> See section on hoards, pp. 158 ff.

<sup>16</sup> Specimens from both sets are found in Find No. 137b (Botes) which was deposited most probably late in the reign of Justin I; see p. 157.

<sup>17</sup> See p. 9 for imitations of Honorius and p. 42 for those of Theodosius II.

<sup>18</sup> See p. 79.

Some comment may be made also on the coins die-linked by the obverse but bearing different officinae on the reverse. One example on the coins of Theodosius II (IMP XXXXII COS XVII/COMOB) is noted in which Cat. No. 296 without officina is die-linked with No. 330 of officina Δ. For Leo, the combinations from the same obverse die are: A/Γ/Ε, Δ/S, and H/I; for Zeno Δ/Z, and for Anastasius Δ/I. This phenomenon has been discussed on several occasions<sup>19</sup> and Grierson has commented on certain fifth century solidi with various combinations of officinae noted on coins struck from the same obverse dies. His study was limited to coins of Basiliscus and Marcus, Zeno and Leo Caesar, and Leo II and Zeno. A few more examples are evident in the Scandinavian material on the coins of Theodosius II, Leo I, Zeno and Anastasius. A complete list of the identical dies in the Scandinavian material is given on pp. 130–36 but extracted from this is the list below of obverse die links of issues with officinae. The phenomenon is clearly more common than previously believed and a thorough study of such die links would contribute toward the understanding of the officinae and the organization of the mint of Constantinople. Grierson also commented on the fact that when an obverse die is combined with two different reverse dies, rarely are they of the same officina; that when the officina was the same on two coins with identical obverses, in most cases the reverse die was the same also. This tendency would seem to be borne out by the Scandinavian material on the coins of Leo I<sup>20</sup> in which there are four instances of reverse die identities as opposed to three instances in which the reverse dies are different. On the western issues of Zeno, on the other hand, there is one set of four coins from the same obverse die and all are with the same officinae but are from four different reverse dies. These are western issues, however, and like the imitations of Anastasius which are included in the list, must be considered apart from the issues of Constantinople.

<sup>19</sup> Pierre Bastien, "Folles de l'atelier de Lyon frappés avec le même coin d'effigie," *SM* 10 (Nov. 1960), 75–77; Philip Grierson, "Coins monétaires et officines à l'époque du bas-empire," *SM* 11 (July 1961), 1–8; C. H. V. Sutherland, "Coins monétaires et officines à l'époque du bas-empire: note supplémentaire," *SM* 11 (Apr. 1962), 73–75. See also D. M. Metcalf, "Organization of the Constantinople Mint for the Follis of the Anastasius Reforms," *NC* 1961, 131–43.

<sup>20</sup> Nos. 422–423 have certain irregularities and Nos. 486–487 are probably of a mint other than Constantinople. See discussion in catalogue, p. 52.

## OFFICINA ISSUES WITH OBERSE DIE IDENTITIES

[ ] Brackets indicate obverse and reverse die links, respectively.

<i>Cat. No.</i>	<i>Off.</i>	<i>Issue</i>	<i>Cat. No.</i>	<i>Off.</i>	<i>Issue</i>
296	—	Theodosius II/	557	Γ	Zeno/CONOB
330	Δ	COMOB	558	Γ	
378	A	Leo I/CONOB	564	Γ	
420	Γ		567	Δ	Zeno/CONOB
441	Ε		574	Z	
442	Ε		603	A	Zeno/COMOB
443	Ε		604	A	
406	B	Leo I/CONOB	606	Γ	Zeno/COMOB
407	B		607	Γ	
408	B	Leo I/CONOB	608	Γ	Zeno/COMOB
409	B		609	Γ	
410	B		610	Γ	
422	Γ	Leo I/CONOB	611	Γ	
423	Γ		636	Δ	Anastasius/
429	Δ	Leo I/CONOB	656	I	CONOB
464	S		681	A	Anastasius/
485	H	Leo I/CONOB	686	A	Ostrogothic
511	I		689	A	Anastasius/
486	H	Leo I/CONOB	690	A	Ostrogothic
487	H		737	I	Justinian I/
			738	I	CONOB

CHART A: DISTRIBUTION OF IDENTICAL DIES  
EXCLUDING LILLÖN

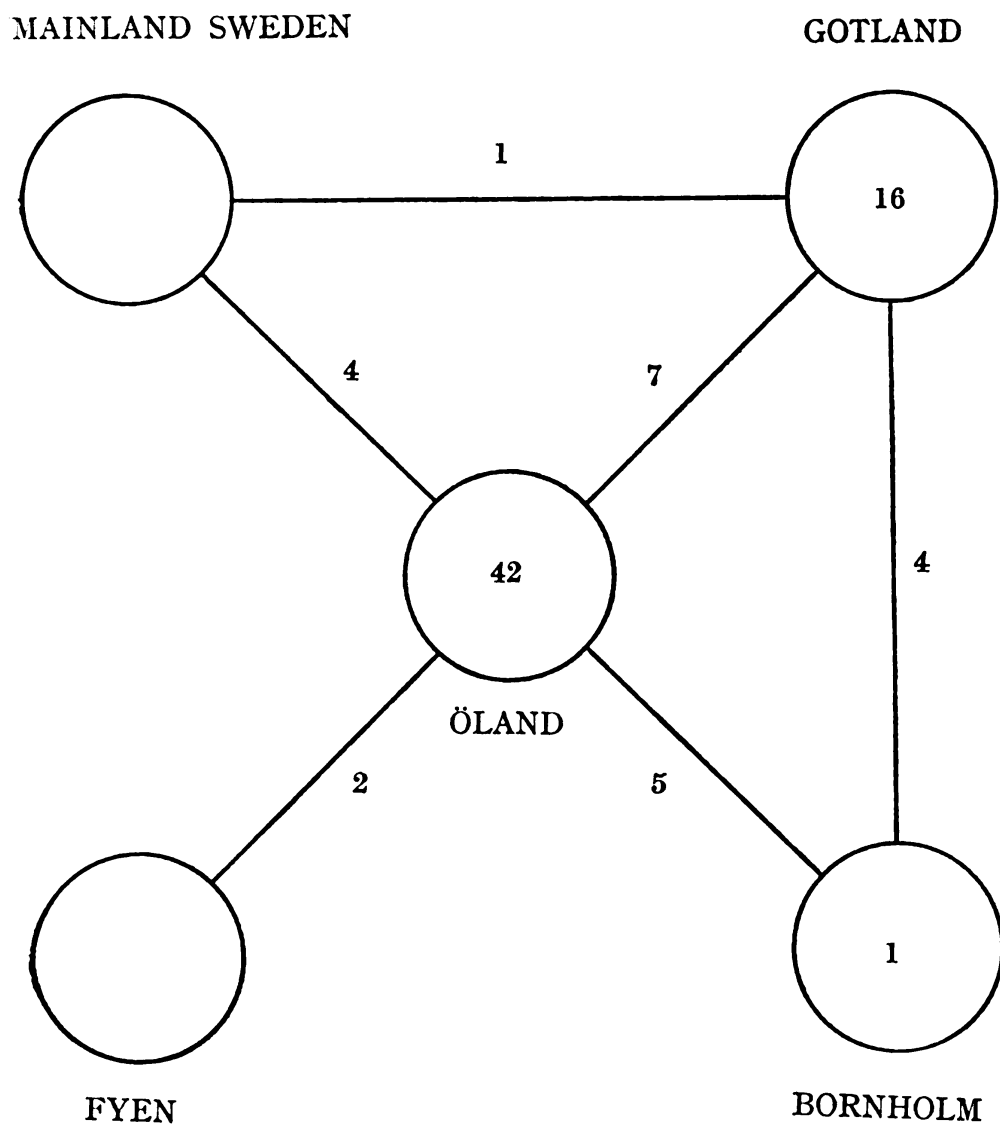




CHART B: DISTRIBUTION OF INDENTICAL DIES  
EXCLUDING LILLÖN

Valentinian III 425-455		Zeno 474-491
Majorian 457-461		Anastasius 491-518
Libius Severus 461-465		Justinian I 527-565
Anthemius 467-472		Imitations of Honorius
Glycerius 473-474		Imitations of Theodosius
Julius Nepos 474-?		Uncertain Imitations
Romulus Augustus 475-476		
Theodosius II 408-450		
Leo I 457-474		

CHART C: DISTRIBUTION OF IDENTICAL DIES  
WITH LILLÖN AS A SWEDISH MAINLAND FIND

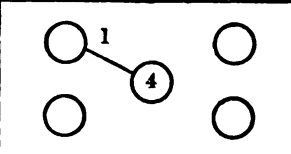
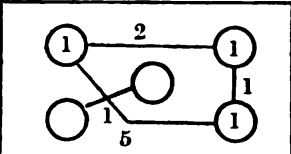
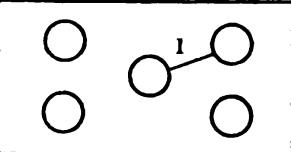
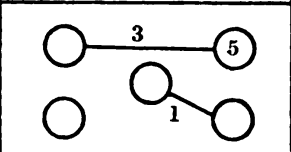
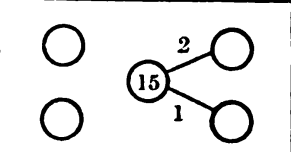
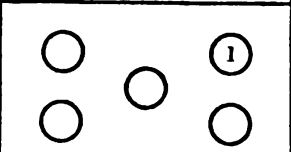
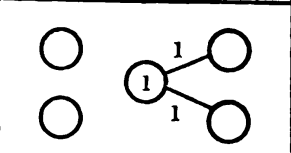
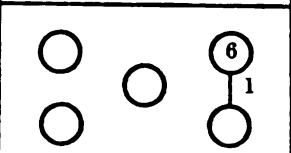
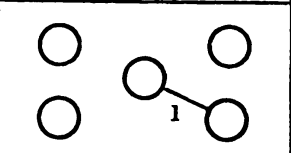
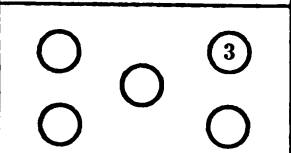
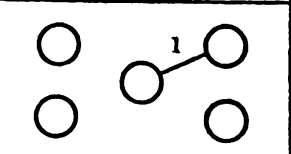
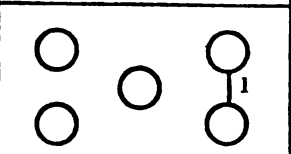
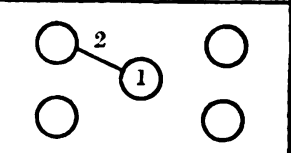
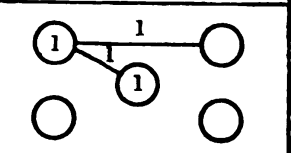
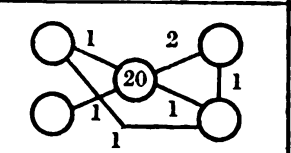
Valentinian III 425-455			Zeno 474-491
Majorian 457-461			Anastasius 491-518
Heraclius Severus 461-465			Justinian I 527-565
Justin II 467-472			Imitations of Honorius
Justinian 473-474			Imitations of Theodosius II
Justinian Nepos 474-?			Uncertain Imitations
Justinian Augustus 475-476			
Theodosius II 408-450			
Justin I 527-574			

CHART D: DISTRIBUTION OF IDENTICAL DIES  
WITH LILLÖN AS A GOTLAND FIND

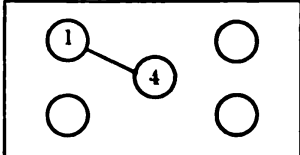
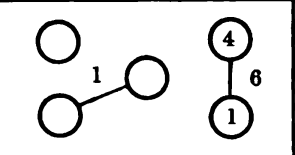
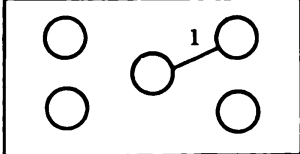
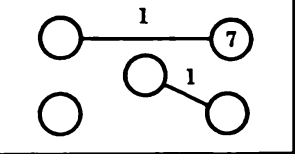
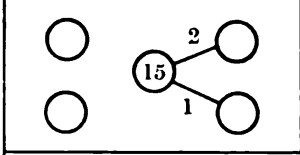
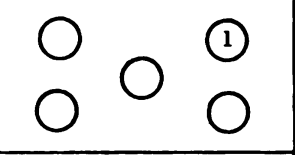
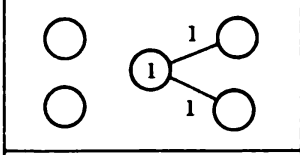
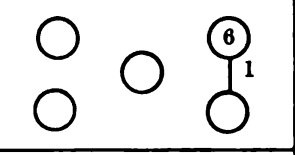
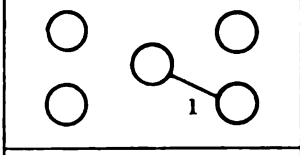
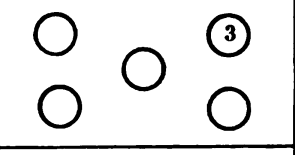
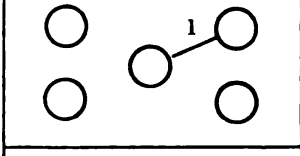
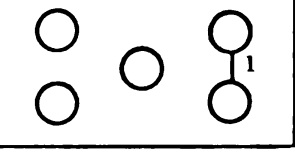
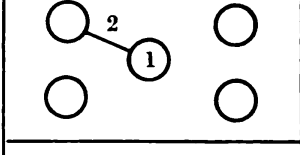
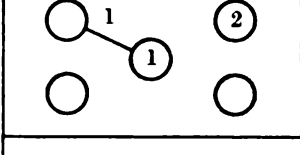
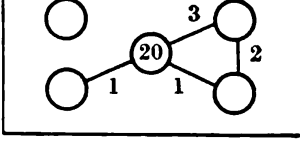
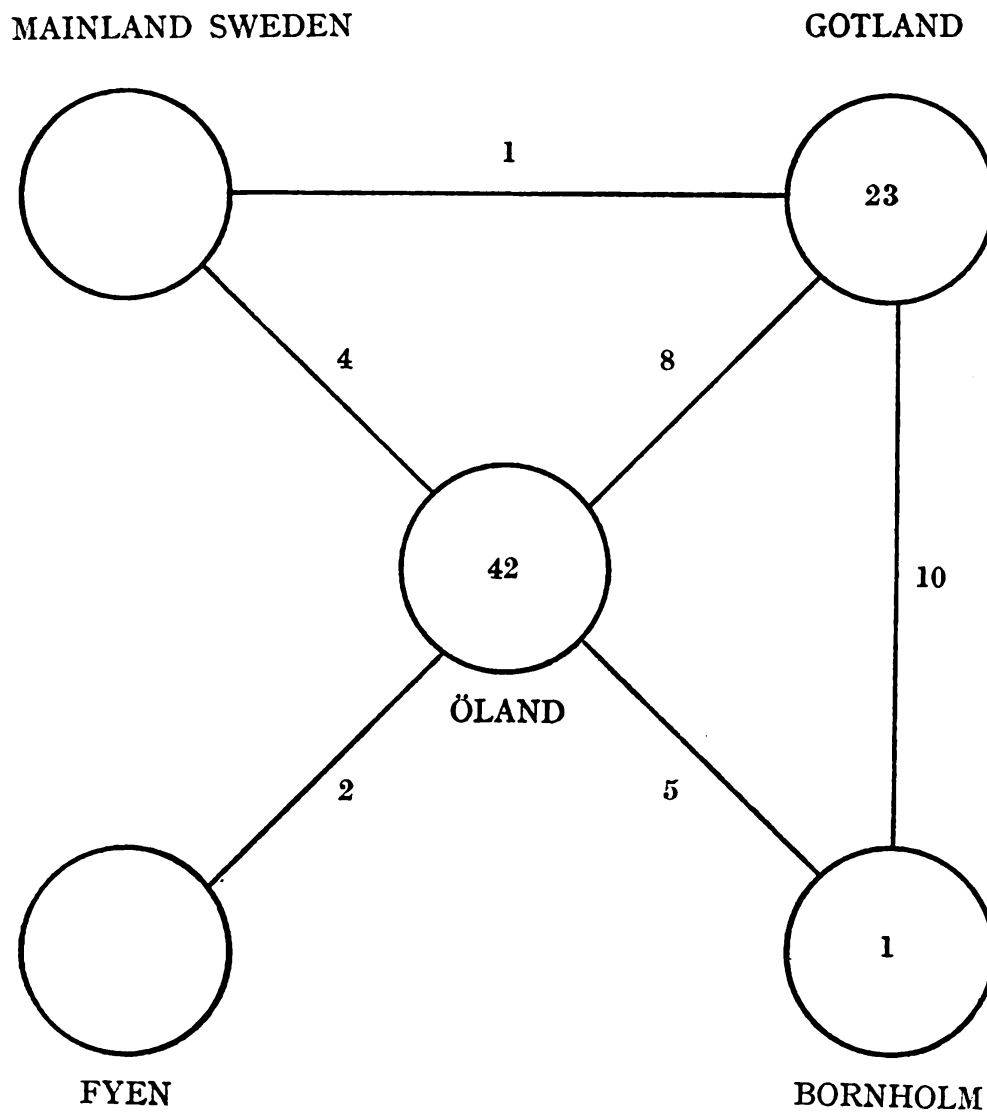
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Majorian 457-461			Anastasius 491-518
Libius Severus 461-465			Justinian I 527-565
Anthemius 467-472			Imitations of Honorius
Glycerius 473-474			Imitations of Theodosius
Julius Nepos 474-?			Uncertain Imitations
Romulus Augustus 475-476			
Theodosius II 408-450			
Leo I 457-474			

CHART E: DISTRIBUTION OF IDENTICAL DIES  
WITH LILLÖN AS A GOTLAND FIND



## COMPLETE LIST OF IDENTICAL DIES (PLATES XIX-XX)

[ ] Brackets indicate obverse and reverse die links, respectively.

<i>Cat. No.</i>	<i>Area</i>	<i>Find No.</i>	<i>Mint</i>	<i>Condition</i>	<i>Remarks</i>
Valentinian III					
136	MS	19b	Rome	fair	PLATE XIX
137	Ö	115	Rome	worn	PLATE XIX
40	Ö	99	Rome	worn	PLATE XIX
41	Ö	115	Rome	fair	PLATE XIX
44	Ö	39	Rome	worn	PLATE XIX
45	Ö	108b	Rome	worn	
46	Ö	99	Rome	good	
Majorian					
104	Ö	86	Milan	worn	
106	G	128a	Milan	v. worn	
Libius Severus					
115	Ö	99	Milan	worn	
116	G	170a	Milan	fair	
117	Ö	63	Milan	fair	
119	B	212	Milan	worn	
120	Ö	89	Milan	worn	

9.

121	Ö	115	Rome	fair	PLATE XIX
122	Ö	110c	Rome	good	PLATE XIX
123	Ö	40a	Rome	fair	PLATE XIX
124	Ö	40c	Rome	fine	PLATE XIX
125	Ö	80a	Rome	fine	PLATE XIX
126	Ö	115	Rome	fine	PLATE XIX
127	Ö	115	Rome	fine	PLATE XIX
138	Ö	96a	Ravenna	good	PLATE XIX
139	Ö	70b	Ravenna	worn	PLATE XIX
140	Ö	60	Ravenna	good	PLATE XIX
141	Ö	118a	Ravenna	fair	PLATE XIX

Anthemius

149	B	205	Milan	fair
150	Ö	90b	Milan	fair
154	Ö	99	Milan	good
155	Ö	121c	Milan	worn
168	G	135	Ravenna	fair
169	Ö	99	Ravenna	v. fine

Glycerius

173	Ö	90b	Ravenna	good
174	B	212	Ravenna	worn

<i>Cat. No.</i>	<i>Area</i>	<i>Find No.</i>	<i>Mint</i>	<i>Condition</i>	<i>Remarks</i>
Julius Nepos					
175	G	137b	Milan	worn	
176	Ö	85	Milan	fair	
Romulus Augustus					
185	Ö	84	Milan	v. fine	
186	MS	16	Milan	fair	
187	Ö	99	Milan	v. fine	
Theodosius II					
249	G	137b	CONOB	worn	<i>Vot</i> 30, off. S
252	MS	6	CONOB	worn	<i>Vot</i> 30, off. S
271	MS	18	CONOB	worn	<i>Imp</i> 42 PLATE XX
272	Ö	99	CONOB	fine	<i>Imp</i> 42 PLATE XX
280	MS	6	CONOB	worn	<i>Imp</i> 42
281	MS	6	CONOB	worn	<i>Imp</i> 42
296	Ö	62	COMOB	worn	<i>Imp</i> 42, off. — (Δ) PLATE XX
330	Ö	112	COMOB	worn	<i>Imp</i> 42, off. Δ (—) PLATE XX
Leo I					
378	Ö	99	CONOB	fine	off. A (Γ, €) PLATE XXV
406	Ö	55a	CONOB	fair	off. B
407	Ö	99	CONOB	fair	off. B

*Identical Dies*

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408	Ö	99	CONOB	v. fine	off. B	PLATE XXV
409	Ö	99	CONOB	v. fine	off. B	PLATE XXV
410	Ö	99	CONOB	fine	off. B	PLATE XXV
412	B	205	CONOB	worn	off. Γ	
420	Ö	99	CONOB	v. fine	off. Γ (A, E)	PLATE XXV
421	MS	6	CONOB	fair	off. Γ	
422	Ö	90b	CONOB	fair	off. Γ	PLATE XX
423	Ö	113b	CONOB	v. fine	off. Γ	PLATE XX
427	G	164a	CONOB	fine	off. Δ	PLATE IX
428	B	218	CONOB	fair	off. Δ	PLATE IX
429	Ö	99	CONOB	worn	off. Δ (S)	PLATE XX
432	Ö	92d	CONOB	fair	off. Δ	
438	MS	6	CONOB	fair	off. Δ	
441	Ö	99	CONOB	v. fine	off. E (A, Γ)	PLATE XXV
442	Ö	99	CONOB	fine	off. E (A, Γ)	PLATE XXV
443	Ö	99	CONOB	fine	off. E (A, Γ)	PLATE XXV
444	Ö	99	CONOB	worn	off. E	
445	G	137b	CONOB	worn	off. E	
464	Ö	78b	CONOB	good	off. S (Δ)	PLATE XX
469	Ö	49	CONOB	fine	off. S	
470	Ö	99	CONOB	fine	off. S	
471	Ö	99	CONOB	good	off. S	
472	Ö	86	CONOB	good	off. S	
473	G	182g	CONOB	fair	off. S	



<i>Cat. No.</i>	<i>Area</i>	<i>Find No.</i>	<i>Mint</i>	<i>Condition</i>	<i>Remarks</i>	
485	Ö	93a	CONOB	worn	off. H (I)	PLATE XX
486	D	193	CONOB	good	off. H	PLATE IX
487	Ö	78a	CONOB	v. fine	off. H	PLATE IX
511	Ö	42	CONOB	fair	off. I (H)	PLATE XX
536	B	215a	Ravenna	worn		PLATE IV
537	Ö	115	Ravenna	fair		PLATE IV
Zeno						
557	G	182k	CONOB	fair	off. Γ	
558	B	212	CONOB	fair	off. Γ	
564	MS	6	CONOB	worn	off. Γ	
567	G	137b	CONOB	worn	off. Δ (Z)	PLATE XX
574	MS	6	CONOB	worn	off. Z (Δ)	PLATE XX
603	Ö	66	COMOB	fair	off. A	
604	D	194	COMOB	worn	off. A	
606	G	137b	COMOB	worn	off. Γ	PLATE XVI
607	G	151	COMOB	v. worn	off. Γ	PLATE XVI
608	B	205	COMOB	worn	off. Γ	
609	B	203	COMOB	worn	off. Γ	
610	MS	6	COMOB	good	off. Γ	PLATE XVI
611	MS	6	COMOB	worn	off. Γ	PLATE XVI



<i>Cat. No.</i>	<i>Area</i>	<i>Find No.</i>	<i>Mint</i>	<i>Condition</i>	<i>Remarks</i>
<b>Imitations of Honorius</b>					
[-22]	G	137 b		fair	PLATE XIII
[-23]	B	212		fair	PLATE XIII
[-24]	G	182 a		fair	PLATE XIII
[-25]	G	127		v. worn	PLATE XIII
[-26]	G	137 b		good	PLATE XIII
[-27]	G	137 b		worn	PLATE XIII
<b>Imitations of Theodosius II</b>					
[-340]	G	122		worn	PLATE XV
[-341]	G	137 b		fair	PLATE XV
[-342]	G	137 b		worn	PLATE XV
<b>Uncertain Imitations</b>					
[-750]	B	203		worn	PLATE XVIII
[-751]	G	159		worn	PLATE XVIII

## CONDITION OF COINS

### COINS AS JEWELRY (PLATES XXI–XXII)

A number of the solidi in the Scandinavian finds had been made into jewelry, either by piercing the coin or by attaching a loop which made it possible to use the coin as a necklace or bracelet. The nature of the alteration varies from a very crudely pierced hole on the flan of the coin to a delicate and intricate border and loop attached to the coin. In most cases the loop was attached in such a way that the portrait of the coin would hang upright but there are several examples where the placing of the alteration indicates that the reverse type was of greater interest. The piercing was more carelessly done and most often neither obverse nor reverse is upright.

The pierced coins number 116 and are distributed on Öland (43), Gotland (43), the Swedish mainland (18), Bornholm (11) and Denmark, west of the Sound (1). Curiously, 21 of the pierced coins have been refilled and they are found on Gotland (10), Öland (6), Bornholm (2) and there are three specimens from Mainland Sweden, two of which also have borders and loops attached.

Coins with loops are less numerous than the pierced coins and are found almost exclusively outside of Öland, Gotland and Bornholm, the main depositories of the solidi. Three of the 27 looped, and thus permanently jeweled, coins are found on Gotland whereas 19 are from Denmark, west of the Sound and 5 are from the Swedish mainland.

Among the looped coins there are three types of alterations. The first is a group of five coins with more elaborate borders and loops. Three from Denmark are identical (Cat. Nos. 136, 147 and 541), each with a beaded border and a large, ornamental loop with high relief. They were found on Jutland, two at Jordrup and the third, close by, at Ejstrup.

At Skottgård, Timrå parish, in Medelpad were found two coins whose border and loop attachments are very similar to each other. The border of one of these coins (No. 317) has a herring-bone pattern while the other (No. 566) has an inner beaded border around which

is a braided border. The loops are large and have parallel rows of spirals with a raised edge in the center. Both also have been pierced and refilled.

Very similar to these two Swedish finds are several specimens from the Continent. A solidus of Valentinian I from a grave find at Soest in Westfalen is almost identical to No. 566 and a coin of Justinian I from the same find has a similar but more elaborately worked spiral loop and braided border.<sup>1</sup> A third specimen from a barbaric grave in Italy shows a loop, very much like that on the Soest Justinian coin, attached to a barbaric triens of Justinian I.<sup>2</sup> Many of the Wieuwerd coins and objects also have similar loop and border arrangements.<sup>3</sup>

A sixth coin should perhaps be placed with this group; No. 274 found on Zealand with a double beaded border and small gap where clearly a loop had once been attached.

The second type of jewelry alteration consists of a simple beaded border and a loop of varying degrees of craftsmanship. No. 460 is without a loop but traces of one are evident on the coin. There are no parallel cases with this type among the coins I have seen from Continental finds.

Finally, the third and most common type has no border at all but only a loop which is generally of better craftsmanship than the loops of the second type above. Nos. 531 and 748 are more similar to the loops of the second group. The loops of the third type are characterized by several divisions marked by different levels of relief. Of particular interest in this class are the six coins of Elsehoved (Find No. 194) which, together with Nos. 93 and 458 of the second group, were found on Fyen with 9 gold spirals and other gold objects. The gold spirals are undoubtedly part of a necklace comprised of these eight solidi. From the differences in the loops and in the dates of the

<sup>1</sup> P. Berghaus, "Die merowingischen Trienten von Altenwalde," *Die Kunde* 12, 1961, 46, no. 4.

<sup>2</sup> A. Alföldi, "Le monete delle necropoli barbariche di Nocera Umbra e di Castel Trosino," *Atti e Memorie dell'Istituto Italiano di numismatica* V, 1925, 73.

<sup>3</sup> J. Lafaurie, B. Jansen, A. N. Zadoks-Josephus Jitta, "Le trésor de Wieuwerd," *Oudheidkundige mededelingen uit het Rijksmuseum van Oudheden te Leiden* XLII, 1961, 78-107. For a discussion of other jeweled coins, see N. L. Rasmusson, "Were Medals of Merit Used and Worn in Antiquity?" *AA* XVI, 1945, 211-22.

coins one suspects that the coins were obtained and added to the necklace at several intervals. Two coins of Majorian (457–461) and Leo I (457–474) have identical loops (Cat. Nos. 108 and 448). The Majorian piece is slightly more worn than the Leo but dates from the early part of Leo's reign; they were probably the first to be acquired, to judge from their date and condition. Later, four more coins were obtained: one of Zeno (474–491) slightly worn and three of Anastasius (491–518) in good condition, all with identical loops (Cat. Nos. 604, 655, 677 and 703). The two remaining pieces of Valentinian III (an imitation) and Leo I (Cat. Nos. 93 and 458) are different from the six just described for they have a beaded edge and a crudely worked loop of the second type discussed above. These two coins are very worn, particularly the Valentinian solidus, and for this reason were probably the last to be added to the necklace. Perhaps at this time the spirals, which are all identical, were made and the necklace created in its final form (PLATE XXII).

Similar loops are noted among the many varieties of jeweled pieces in the Wieuwerd hoard<sup>4</sup> and on a solidus of Arcadius, also from Frisia.<sup>5</sup> Cruder loops are found on a coin from Frisia,<sup>6</sup> two from Niederselters<sup>7</sup> and two from Weimar.<sup>8</sup> The last are of Basiliscus and Marcus, Anastasius, Justin I (Ostrogothic), Zeno and Valentinian III, respectively.

Of particular significance in this examination of the jeweled coins is the distribution of the pierced but refilled coins as opposed to that of the permanently jeweled coins with loops. The refilled coins can only be the result of one intention—to restore the coin's original function as currency.<sup>9</sup> They are concentrated on Öland and Gotland

<sup>4</sup> Ibid.

<sup>5</sup> P. C. J. A. Boeles, *Friesland tot de elfde eeuw, Zijn vóór- en vroege geschiedenis* (2nd ed., 's-Gravenhage, 1951), Bijlage VIII, no. 5.

<sup>6</sup> Ibid., no. 26.

<sup>7</sup> Joachim Werner, *Münzdatierte austrasische Grabfunde* (Berlin, Leipzig, 1935), Münzkatalog I, M 8 and 13.

<sup>8</sup> Ibid., M 3 and 7.

<sup>9</sup> Hauberg commented on these repairs and drew the same inference from them: that the coins were circulated in Scandinavia (see p. 85). His work was overlooked by later writers, however, and T. J. Arne, in discussing a few of these coins in the Smiss and Botes hoards, stated that the repairs must have been made in the country of origin, but in any case, not on Gotland where one would expect rather that the piercing was done. Arne, *AA* 1931, 15.

while the permanently jeweled coins are found in the peripheral areas outside the Baltic islands where 85 per cent of the solidi finds occur. This distribution certainly suggests that the coins were circulated on Öland, Gotland and perhaps Bornholm. It would appear also that the two refilled and also looped coins found on Mainland Sweden probably arrived there already pierced and refilled and subsequently the loops and borders were attached. The third refilled coin from Mainland Sweden is from the Lillön hoard (Find No. 6).<sup>10</sup>

## COINS WITH LOOPS

## Type I Elaborate border and loop

<i>Cat. No.</i>	<i>Issue</i>	<i>Find No., Area</i>	
136	Libius Severus	190, Jutland	PLATE XXI
147	Libius Severus, imitation	188, Jutland	PLATE XXI
274*	Theodosius II	198, Zealand	PLATE XXI
317	Theodosius II	2, Medelpad	PLATE XXI
541	Leo II/Zeno	188, Jutland	PLATE XXI
566	Zeno	2, Medelpad	PLATE XXI

## Type II Simple border and loop

85	Valentinian III	199, Zealand	PLATE XXI
93	Valentinian III, imitation	194, Fyen	PLATE XXII
184	Julius Nepos, imitation	186, Jutland	PLATE XIV
210	Theodosius II	195, Fyen	PLATE XXI
297	Theodosius II	14, Västergötland	PLATE XXI
324	Theodosius II	23, Skåne	PLATE XXI
458	Leo I	194, Fyen	PLATE XXII
460*	Leo I	187, Jutland	
639	Anastasius	176, Gotland	PLATE XXVI

\* loop missing.

<sup>10</sup> See above, pp. 120–22, for a discussion of the origin of this hoard.

## Type III Loop only

<i>Cat. No.</i>	<i>Issue</i>	<i>Find No., Area</i>	
54*	Valentinian III	137b, Gotland	
108	Majorian	194, Fyen	PLATE XXII
262	Theodosius II	28, Skåne	
448	Leo I	194, Fyen	PLATE XXII
493	Leo I	193, Fyen	PLATE XXII
531	Leo I	152, Gotland	PLATE XXII
604	Zeno	194, Fyen	PLATE XXII
655	Anastasius	194, Fyen	PLATE XXII
677	Anastasius, imitation	194, Fyen	PLATE XXII
703	Anastasius, imitation	194, Fyen	PLATE XXII
747	Justinian I, imitation	189, Jutland	PLATE XXII
748	Justinian I, imitation (triens)	201, Zealand	

\* loop missing.

## PIERCED COINS

9	Honorius	86, Öland	
13	Honorius	87, Öland	PLATE I
17	Honorius	18, Mainland Sweden	
27	Honorius, imitation	137b, Gotland	PLATE XIII
46	Valentinian III	99, Öland	PLATE II
47*	Valentinian III	72, Öland	PLATE XXIII
72*	Valentinian III	51b, Öland	
75	Valentinian III	212, Bornholm	
89	Valentinian III, imitation	137b, Gotland	PLATE XIII
91	Valentinian III, imitation	55b, Öland	PLATE XIII
92*	Valentinian III, imitation	205, Bornholm	PLATE XIII
99	Majorian	176, Gotland	PLATE III
105 (?)	Majorian	137b, Gotland	
121	Libius Severus	115, Öland	
150	Anthemius	90b, Öland	
158	Anthemius	100b, Öland	PLATE V
162	Anthemius	19c, Mainland Sweden	
173	Glycerius	90b, Öland	PLATE XXV
174	Glycerius	212, Bornholm	PLATE VI

\* refilled.



<i>Cat.No.</i>	<i>Issue</i>	<i>Find No., Area</i>	
175*	Julius Nepos	137b, Gotland	PLATE VI
183	Julius Nepos, imitation	192, Fyen	PLATE XIV
186	Romulus Augustus	16, Mainland Sweden	
190	Arcadius	73, Öland	PLATE I
198	Theodosius II	214b, Bornholm	
204	Theodosius II	203, Bornholm	
206	Theodosius II	137b, Gotland	
212	Theodosius II	80a, Öland	PLATE VIII
215	Theodosius II	61, Öland	
220	Theodosius II	99, Öland	
241*	Theodosius II	70c, Öland	PLATE XXIII
245	Theodosius II	212, Bornholm	
247	Theodosius II	18, Mainland Sweden	
250	Theodosius II	179c, Gotland	
259	Theodosius II	68, Öland	
267	Theodosius II	18, Mainland Sweden	
268	Theodosius II	86, Öland	
269*	Theodosius II	121f, Öland	
271	Theodosius II	18, Mainland Sweden	PLATE XX
275	Theodosius II	212, Bornholm	
283	Theodosius II	62, Öland	PLATE VII
285*(?)	Theodosius II	99, Öland	
290	Theodosius II	54, Öland	PLATE VIII
291	Theodosius II	44, Öland	
293	Theodosius II	212, Bornholm	
298	Theodosius II	5, Mainland Sweden	
314	Theodosius II	86, Öland	
317*	Theodosius II	2, Mainland Sweden	PLATE XXI
322	Theodosius II	15, Mainland Sweden	
323	Theodosius II	72, Öland	
325*(?)	Theodosius II	6, Mainland Sweden	
329	Theodosius II	86, Öland	PLATE VIII
333	Eudocia	62, Öland	
334	Pulcheria	87, Öland	PLATE VII

\* refilled.

<i>Cat.No.</i>	<i>Issue</i>	<i>Find No., Area</i>	
340	Theodosius II, imitation	122, Gotland	PLATE XV
342	Theodosius II, imitation	137b, Gotland	PLATE XV
355	Marcian	99, Öland	
384	Leo I	99, Öland	
398*	Leo I	137b, Gotland	PLATE XXIII
405	Leo I	3, Mainland Sweden	
406	Leo I	55a, Öland	
411	Leo I	121g, Öland	
415	Leo I	175c, Gotland	
423	Leo I	113b, Öland	PLATE XX
436	Leo I	83, Öland	
437	Leo I	18, Mainland Sweden	
439	Leo I	115, Öland	
453	Leo I	169, Gotland	
456*	Leo I	137b, Gotland	PLATE XXIII
462*	Leo I	67, Öland	PLATE XXIII
464	Leo I	78b, Öland	PLATE XX
471	Leo I	99, Öland	
474	Leo I	137c, Gotland	
476	Leo I	104, Öland	
485	Leo I	93a, Öland	PLATE XX
489	Leo I	18, Mainland Sweden	
508	Leo I	148, Gotland	
517*	Leo I	162a, Gotland	PLATE XXIII
527	Leo I	175b, Gotland	
530	Leo I	80a, Öland	PLATE XXIV
546	Zeno	169, Gotland	
550	Zeno	169, Gotland	
556	Zeno	169, Gotland	
561	Zeno	13, Mainland Sweden	
566*	Zeno	2, Mainland Sweden	PLATE XXI
568	Zeno	137b, Gotland	PLATE X
573	Zeno	137b, Gotland	
581	Zeno	71, Öland	
589	Zeno	6, Mainland Sweden	

\* refilled.

<i>Cat.No.</i>	<i>Issue</i>	<i>Find No., Area</i>	
592*	Zeno	181, Gotland	PLATE XXIII
615	Zeno	212, Bornholm	PLATE XXXII
616	Zeno	182j, Gotland	PLATE XVI
620	Basiliscus	8, Mainland Sweden	
630*	Anastasius	122, Gotland	PLATE XXIX
634	Anastasius	171, Gotland	
639*	Anastasius	176, Gotland	PLATE XXVI
650	Anastasius	47c, Öland	PLATE XI
653	Anastasius	1820, Gotland	PLATE XI
659	Anastasius	143, Gotland	
660	Anastasius	122, Gotland	PLATE XXIX
664	Anastasius	179a, Gotland	PLATE XXIX
683	Anastasius	177, Gotland	PLATE XVII
685	Anastasius	179a, Gotland	PLATE XXIX
692*	Anastasius	174, Gotland	PLATE XXIII
693*	Anastasius	220, Bornholm	PLATE XXXII
708	Anastasius	163, Gotland	PLATE XVII
717*	Anastasius	122, Gotland	PLATE XXX
719	Anastasius	219, Bornholm	PLATE XXXIII
722	Justin I	88b, Öland	PLATE XII
731	Justinian I	140, Gotland	PLATE XII
732	Justinian I	172, Gotland	PLATE XII
736	Justinian I	122, Gotland	PLATE XXX
739	Justinian I	122, Gotland	PLATE XXX
741	Justinian I	122, Gotland	PLATE XXX
749*	Theodebert	122, Gotland	PLATE XXX
754	Uncertain imitation	18, Mainland Sweden	PLATE XVIII
758	Uncertain imitation	138, Gotland	PLATE XVIII

\* refilled.

Öland	43, 6 refilled
Gotland	43, 10 refilled
Bornholm	11, 2 refilled
Mainland Sweden	18, 3 refilled
Fyen	1

## MUTILATED SOLIDI (PLATE XXIII)

A number of the solidi in the Scandinavian finds have been mutilated by a mark on the face of the emperor's portrait. Thirty-six coins effaced in this way have been identified and undoubtedly there are others which cannot be determined with certainty because of the degree of wear of the coins. Some disfiguration is also visible on the reverse exactly opposite the obverse mark that must have been made with the same blow that was struck the obverse. The marks are always the same (𐌹) and seem to be deliberate.

The mutilated solidi are all of eastern emperors and all with facing portraits. They are of Theodosius II (11), Marcian (2), Leo I (15), Zeno (2), Basiliscus and Marcus (1), Anastasius (3) and Justinian I (2).

Mutilations of a different type, found on other coinages, have been interpreted as test marks. The Viking coins, for example, often bear notches or fine incisions on or near the edge of the coin.<sup>11</sup> In a hoard of Alexanders from North Serbia, most of the coins have a gash on the flan.<sup>12</sup>

That the mutilations on the solidi are test marks is at first the reasonable explanation but there are other considerations. First, the marks are unlike any of the usual type of test mark. Second, the mutilations are invariably on the face of the emperor. Also, they are found only on eastern emperors' coins, those issues with facing portraits. The western emperors escaped unscathed.

Solidi from Continental finds have revealed a few similar specimens. Two coins of Leo I and Theodosius II from Caseburg in Poland are mutilated, one Basiliscus in the Lyon collection, one Leo I in Trier and one Theodosius II in the Budapest collection. Only the Caseburg coins have verified find places. Still other coins in the Scandinavian finds and from Continental collections appear to have been deliberate-

<sup>11</sup> See Ulla S. Linder Welin, "Graffiti on Oriental Coins in Swedish Viking Age Hoards," *Meddelanden från Lunds universitets historiska museum* 1955-1956, 149-71.

<sup>12</sup> Virginia Joyce Hunter, "A Third Century Hoard from Serbia and its Significance for Celtic History," *ANSMN* 13 (in press). The gashes, which are rather wide and deep, are always on the obverse. Similar gashes appear on Roman aurei found in India. See Sir Mortimer Wheeler, *Rome Beyond the Imperial Frontiers* (New York, 1955), p. 139.

ly effaced in other ways, by filing or rubbing, the result being the same—obliteration of the portrait. If this also was the intention, it may have political implications.<sup>13</sup> The facts do not suggest that the mutilations were made in Scandinavia; they are common among the Scandinavian material but a few coins from Continental collections are known also. Whether they are test marks or deliberate mutilations, it would seem more probable that they were made by peoples living close to the empire and perhaps by those who were the intermediaries in the contact between Scandinavia and the South.

In addition to these mutilations, graffiti of various kinds are often found on the coins. They have not been noted in the catalogue for the record is undoubtedly incomplete. Some were apparent from the photographs but the coins themselves should be examined, preferably under a microscope. Examples of these graffiti are N, H, +, X, P, N, Z, A, B, 7, O. In some cases there is a resemblance to Runic characters.<sup>14</sup>

## MUTILATED SOLIDI

<i>Cat. No.</i>	<i>Issue</i>	<i>Find No.</i>	
203	Theodosius II, <i>Vot 20</i> , CONOB	115	
232	Theodosius II, <i>Vot 30</i> , CONOB	137b	
241	Theodosius II, <i>Vot 30</i> , CONOB	70c	PLATE XXIII
250	Theodosius II, <i>Vot 30</i> , CONOB	179c	
252	Theodosius II, <i>Vot 30</i> , CONOB	6	
258	Theodosius II, <i>Vot 30</i> , CONOB	212	
260	Theodosius II, <i>Vot 30</i> , CONOB	58	
266	Theodosius II, <i>Vot 30</i> , CONOB	212	
307	Theodosius II, <i>Imp 42</i> , COMOB	220	PLATE XXIII
310	Theodosius II, <i>Imp 42</i> , COMOB	215a	
316	Theodosius II, <i>Imp 42</i> , COMOB	156a	
371	Marcian, CONOB	115	
374	Marcian, CONOB	6	

<sup>13</sup> An example of a political mutilation is discussed by Michael Dolley, "Odium Numismaticum—Two Ultonian Manifestations," in *Numismatic Circular* Sept. 1965, 183–84.

<sup>14</sup> See p. 10, n. 13.

<i>Cat.No.</i>	<i>Issue</i>	<i>Find No.</i>	
382	Leo I, CONOB	137b	
383	Leo I, CONOB	137b	
396	Leo I, CONOB	212	
401	Leo I, CONOB	137b	
414	Leo I, CONOB	193	PLATE XXIII
417	Leo I, CONOB	137b	
431	Leo I, CONOB	212	
433	Leo I, CONOB	115	
461	Leo I, CONOB	26	
462	Leo I, CONOB	67	PLATE XXIII
484	Leo I, CONOB	137b	
488	Leo I, CONOB	137b	PLATE XXIII
502	Leo I, CONOB	130b	PLATE XXIII
510	Leo I, CONOB	137b	
513	Leo I, CONOB	6	
564	Zeno, CONOB	6	
578	Zeno, CONOB	137b	
628	Basiliscus/Marcus, CONOB	154	PLATE XI
634	Anastasius, CONOB	171	
647	Anastasius, CONOB	6	PLATE XXXI
658	Anastasius, CONOB	176	PLATE XXVI
732	Justinian I, CONOB	172	PLATE XII
736	Justinian I, CONOB	122	PLATE XXX

## RELATIVE WEAR

Examining the relative wear of the solidi has yielded information of some importance. The coins were graded very fine, fine, good, fair, worn or very worn. Admittedly, the hazards involved in assigning such ratings—from photographs—are very great, for both profile and facing portraits, a variety of reverse types, poor strikings and defective dies, as well as deliberate mutilations had to be taken into account. Nevertheless, it was felt necessary to undertake the study and although many of the assigned ratings may be debatable, the relative significance of the figures cannot be distorted by any changes.

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What was evident, first of all, was a marked geographical distinction in the degree of wear of the coins; the coins found on Öland are much superior as a group to the coins from any of the other areas, particularly Gotland and Bornholm. Öland's coins range from very fine to very worn as do the coins of the other areas but they reveal a higher concentration in the better condition groups with a low percentage rated very worn. The table below illustrates this:

A.D. 395-565	v. fine/fine	good	fair	worn	v. worn	good:bad
Öland	19%	21%	32%	24%	4%	40:60%
Gotland	4	8	29	45	14	12:88
Bornholm	1	4	21	60	14	5:95
Mainland						
Sweden <sup>15</sup>	9	12	29	30	20	21:79
Denmark, west						
of the Sound	10	17	10	35	28	27:73

It is clear, at any rate, that the coins as a whole show signs of wear. About fifty per cent of the total of all the coins have been rated worn or very worn while another forty per cent show signs of wear. Only ten per cent have been rated very fine or fine and come close to being uncirculated.

Thus, at some stage in their history, between the time they left the mint and the time they became buried treasure, most of these coins had been circulated. It becomes apparent, also, that they must have been circulated in Scandinavia and, more precisely, on Öland, Gotland and Bornholm. The evidence allows no other interpretation. First, the existence of die identities among the solidi indicates that some of the coins at least must have arrived soon after being issued, particularly those of Libius Severus and Leo I where four and five coins from the same die are found. Taking the identical dies of Leo as an illustration, 6 are worn, 10 fair, 4 good, and 6 very fine. Thus, most of them are in fairly good condition but a considerable number are worn. The condition of any two die-linked

<sup>15</sup> The Lillön hoard (Find No. 6) is included in these figures although it has been suggested above (pp. 120-22) that it was originally formed on Gotland. Without the Lillön coins, the ratio of good to bad coins is 13:87%.

coins also varies and it is unlikely that such variance in condition could occur before the coins arrived in Scandinavia and identical dies still be as numerous as they are. More important, there is the indisputable evidence that the Öland coins as a group are in better condition than the Gotland and Bornholm coins—a distinction that could not have been determined before the coins arrived in Scandinavia. In connection with this, also, is the significant distribution of the jeweled coins in which the permanently jeweled coins with loops are found almost exclusively in areas other than the main depositories of the solidi (Öland, Gotland and Bornholm) whereas the pierced but refilled coins are found, with three exceptions, on Öland, Gotland and Bornholm.

Thus, several factors point to the same conclusion, namely that the coins were circulated on Öland, Gotland and Bornholm. The coins on Öland are less worn undoubtedly because the hoards were deposited on that island before 480 while those of Gotland and Bornholm were not buried until sometime in the sixth century.

One other factor, however, must be considered. The coins on Gotland and Bornholm are most numerous for the period after Leo I, whereas the importation on Öland ceases at this time. Assuming a change in the source of the solidi under Zeno (as was suggested in the study of the identical dies, p. 113), this could possibly account for the geographical distinctions in the degree of wear if, under Zeno and his successors, the imported solidi were obtained from the currency in circulation within the empire and not from direct payments as before. Thus, it is of importance to examine only those coins which date before the reign of Zeno, most of which presumably were introduced contemporaneously. The figures are as follows:

A.D. 395-476	v. fine/fine good fair worn				v. worn good:bad	
Öland	19%	21%	32%	24%	4%	40:60%
Gotland	1	4	23	56	16	5:95
Bornholm	1	3	17	63	16	4:96
Mainland Sweden <sup>16</sup>	3	12	29	32	24	15:85
Denmark, west of the Sound	15	5	10	35	35	20:80

<sup>16</sup> Without Lillön the ratio is 16:84%.



The geographical distinctions are still apparent and it is of interest that, in this period when Gotland and Bornholm were in the same position in regard to Öland's primacy, the coins reveal a similar distribution in the degree of wear. In contrast, the first table covering all the coins indicated a higher percentage of worn coins on Bornholm even though the activity continued as long if not longer on Gotland than it did on Bornholm. A possible explanation for this is that Bornholm played a secondary rôle in the solidi activity during the entire period and received solidi only after they had already received some circulation—first on Öland during that island's primacy and later on Gotland. No doubt because of this one rarely finds a specimen in very fine or fine condition on Bornholm. This, of course, increases the percentage of the worn coins.

The coins from Mainland Sweden and Denmark, west of the Sound also show a certain amount of wear but this too may be because the coins most probably reached these areas only after having received some circulation on Öland and Gotland and the wear of these coins does not indicate additional circulation in these peripheral areas as well. The prevalence of the permanently jeweled coins in these parts also indicates that the solidi were more often valued as jewelry.<sup>17</sup> The coins from these areas are too few to attach any significance to the figures but it may be noted that the ratio of good coins is slightly higher in these areas than on Gotland and Bornholm perhaps because the coins did not receive additional circulation in these areas.

<sup>17</sup> This is particularly true of Denmark, west of the Sound where 19 of the 29 coins are looped and one other is pierced. About half of the Swedish mainland finds, excluding the Lillön hoard, are looped or pierced.

## HOARDS

By the fact of their deposit in the earth, most of the finds can be labeled hoards but this term is generally applied to a find consisting of several coins and the exact number which might constitute a hoard is, by necessity, arbitrarily set. For the purpose of this study any find consisting of five or more solidi is considered a hoard. The distinction is necessary for it is only multiple finds whose approximate burial dates can be determined.<sup>1</sup> Needless to say, the larger the hoard the greater the certainty with which the burial date is determined by the latest coin. With five coins as the minimum number for a hoard, the solidi finds include 7 hoards from Öland, 10 from Gotland and 6 from Bornholm, most of which consist of well over five coins.

The hoard material is particularly important for dating the warfare which occurred on the Baltic islands toward the end of the Migration Age. Archaeological excavations on Öland, Gotland and Bornholm have disclosed evidence of the destruction, burning and abandonment of the sites in this period.<sup>2</sup> The exact date or dates of these attacks are determined above all by the coin material which, however, has been interpreted differently by scholars.

### ÖLAND (PLATES XXIV–XXV)

It is apparent from the finds that the importation of solidi ceased on Öland before it did on Gotland and Bornholm and the statistics would seem to indicate that this occurred soon after the reign of Leo I (see Table C, p. 109). Eighty coins of Leo are known for Öland but only 7 of his successor Zeno, 1 of Basiliscus, 1 of Anastasius, 1 of Justin I and 1 of Justinian I. Elsewhere in Scandinavia 85 solidi of

<sup>1</sup> Earlier studies of the solidi often include as hoards, finds of two or more solidi and also finds of gold objects with a single solidus. Such finds are hoards by the fact of their deposit in the earth but they have little or no value as hoards when used to date the deposit of the coins.

<sup>2</sup> See Stenberger, *Öland*; Nerman, *Gotland*; Stenberger, *Vallhagar*; Klindt-Jensen, *Bornholm*.

Zeno are known yet up till this time Öland had revealed the bulk of the solidi (see p. 105). The hoard evidence is more conclusive for none of the late fifth or sixth century coins are included in them. The two latest hoards are also the largest Öland hoards and both have a *terminus post quem* of 475; Find No. 99 closes with a coin of Romulus Augustus (475–476) and No. 115 with a coin of Basiliscus (475–476). A third hoard, No. 90b, has a *terminus post quem* of 473 closing with a coin of Glycerius (473–474). Four other hoards close with Leo I (457–474) whose long reign makes it difficult to be precise with dates. Each of these, however, has several coins of Leo accompanied by single specimens usually of other emperors which suggests a time well into Leo's reign for the deposit. Three of these four hoards contain coins of contemporary western emperors as well, Anthemius and Libius Severus, which give a *terminus post quem* of 467 in two cases and 461 in the other. Thus, two hoards are definitely after 475, one after 473, two after 467, one after 461 and one after 457.<sup>3</sup>

Although the largest hoards have to be after 475, others might have been deposited earlier and this fact has led to a controversy concerning the date of the attacks on Öland. Bolin has suggested a period of forty years between 450–490 for the deposit of the hoards and thus for the warfare.<sup>4</sup> Werner, on the other hand, thought it probable that all the Öland hoards, early and late, were deposited on one occasion as a result of a catastrophe which occurred between 480 and 490.<sup>5</sup> Stenberger, in 1933, dated Öland's catastrophe to

<sup>3</sup> These are hoards of at least five solidi. Including those deposits of two to four coins, there are six hoards with a *terminus post quem* of 473/5, two of 467, three of 461, three of 457, one of 443, one of 425 and one of 408. These finds are as follows:

<i>terminus post quem</i>	Find No.	Latest coin
475	85	Romulus Augustus
474	46b	Zeno
473	72	Glycerius
461	63	Libius Severus
	110c	Libius Severus
457	42	Leo I
	62	Majorian
443	112	Theodosius II, <i>Imp 42 Cos 17</i>
425	82	Valentinian III
408	53	Theodosius II

<sup>4</sup> Bolin, *Fynden av romerska mynt i det fria Germanien*, pp. 248–53.

<sup>5</sup> Werner, *Fornvännan* 44, 1949, 260.

about 500 but in his later work on Vallhagar, the Gotland site, he tends to support Bolin for a period of intermittent warfare covering many years, with the end of the import occurring in the late years of Zeno and before Anastasius.<sup>6</sup>

Three of the seven hoards close after 473/5, however, and these include the two largest hoards. The earlier hoards cannot be clearly associated with an attack for they are also the smallest ones and a less reliable index of the date of deposit. Furthermore, the four "early" hoards include coins of Leo and can thus be as late as the other three. The two latest hoards, which are also the largest by far, have a *terminus post quem* of 475 and it must have been after this date that the destruction took place bringing to a close the import of solidi.

How soon after 475 is another problem. Bolin, in dating the warfare on Öland, extended the attacks down to ca. 490. Werner and Stenberger also, noting that 15 coins of the period 474-491 were known on Öland whereas 38 from the same period were known on Gotland, concluded that the coin stream must have ended in the late reign of Zeno and before Anastasius.<sup>7</sup> The present tabulation records 16 coins from Öland for the period 474-491 but of these only 7 are of Zeno which could thus be as late as 491 while the others are of Julius Nepos 2, Romulus Augustus 3, Leo II and Zeno 3, and Basiliscus 1, none of which is later than 476. With only 7 coins of Zeno on Öland (and only one of these in a multiple find) and 85 elsewhere in Scandinavia, including 32 on Gotland, a date rather early in Zeno's reign is indicated.

The condition of the late coins in the latest hoards is of prime importance to this question (see PLATE XXV). No. 99 closes with a solidus of Romulus Augustus (A.D. 475-476, Cat. No. 187) in very fine condition and includes one of Leo II/Zeno (A.D. 474, Cat. No. 543) in good condition and 26 of Leo (A.D. 457-474), several of which are in very fine or fine condition. No. 115 closes with a solidus of Basiliscus (A.D. 475-476, Cat. No. 623) in fine condition. Both hoards must have been deposited soon after 476. One other hoard closes slightly earlier but its latest coin shows a little more wear: No. 90b with a coin of Glycerius (A.D. 474, Cat. No. 173) in good condition.

<sup>6</sup> Stenberger, *Öland*, p. 211; *Vallhagar*, pp. 1171-72.

<sup>7</sup> Stenberger, *Vallhagar*, p. 1162; Werner, *Fornvännen* 44, 1949, 159-60.

This hoard must have been deposited about the same time as Nos. 99 and 115. The actual date of deposit of the other hoards can only be estimated but the degree of wear of some of the coins in the hoards would not preclude a period of circulation for them into the 470s.<sup>8</sup> In addition, many of the smaller multiple finds show sufficient wear to place them in this decade also. Two finds, Nos. 46b and 85, would seem to be somewhat later.<sup>9</sup> Consisting of three and two coins respectively, they are not sufficient evidence for extending the disaster on Öland into the next decade.

Of interest also is the distribution of the short-reigned emperors in the Scandinavian finds. In the study of the identical dies it was shown that Öland was the primary receiving and distributing center through the reign of Leo and had the greatest number of solidi of all the Scandinavian areas for that period, while Gotland held the same position in the period following. The years immediately after the reign of Leo were critical ones for Öland and thus an examination of the distribution of the short-reigned emperors of these years might well reveal a more definite date for the end of the import on Öland.

Three of the Öland hoards close with short-reigned emperors and the distribution of these solidi elsewhere in Scandinavia is as follows:

		Ö	G	B	MS
No. 90b	Glycerius (473-474)	2		1	
No. 99	Leo II/Zeno (474)	3	1		
	Romulus Augustus (Oct. 475-Sept. 476)	3			1
No. 115	Basiliscus, alone (Jan. 475-?)	1	2	1	4 <sup>10</sup>
	with Marcus (?-Aug. 476)		1	1	

<sup>8</sup> Find No. 87 includes two coins of Leo, one worn and one fair; No. 80a includes one of Majorian and two coins of Leo, all fair; No. 86 includes a coin of Anthemius in good condition, one of Leo, worn, and one of Majorian, worn (See PLATE XXIV). The coins of No. 50 are not available.

<sup>9</sup> No. 46b, one coin of Zeno, fair; No. 85, one coin of Julius Nepos and one of Romulus Augustus, both fair (PLATE XXIV).

<sup>10</sup> Three of the four are from the Lillön hoard (Find No. 6) which was shown above (pp. 120-22) to have been most probably a hoard transferred from Gotland.

Öland still has the bulk of the solidi of Glycerius, Leo II and Zeno and Romulus Augustus but has only one coin of Basiliscus while seven others are found elsewhere in Scandinavia. From the joint reign of Basiliscus and Marcus, Öland has no solidi. Romulus Augustus and Basiliscus (including Marcus) were contemporary and both reigns ended at the same time, yet the coins of Romulus are concentrated on Öland while most of those of the eastern emperor Basiliscus would seem to have arrived after Öland's hoards had been deposited, at a time when the stream was directed to Gotland. These coins are not numerous but the pattern of their distribution as it now stands also points to 476/77 as the critical period for the solidi activity on Öland.

To sum up, all indications are that the importation of solidi on Öland ceased soon after 476, undoubtedly as a consequence of attacks which forced the coins into the ground and brought to a close the activity on that island. The evidence of Hoards 99 and 115 established a *terminus post quem* of 475 for the disaster and the condition of the latest coins in the hoards indicated that they must have been deposited soon after this. Comparative statistics for finds of Zeno on Öland and Gotland also revealed that the import of Öland must have ended early in the reign of Zeno. Finally, the pattern of distribution of the short reigned emperors pointed to a critical period in Öland's history at this same time.

A period of warfare on Öland previous to this cannot be determined from the hoard material. Although the *terminus post quem* of the "early" hoards is 467 in two instances, 461 in one and 457 in one, none of these hoards can be precisely dated and all can be as late as the 470s. Furthermore, they contain coins in various degrees of wear which would preclude a date of deposit as early as the *terminus post quem* in each case.

Nor can the disaster on Öland be extended down as late as 490. If a few coins, because of their condition, would seem to have been circulated beyond the late 470s they are either (a) survivals of the disaster which were deposited under other circumstances or (b) stray imports such as the three sixth century coins which found their way to Öland long after its activity had ended.

## GOTLAND (PLATES XXVI–XXX)

With the destruction of Öland about 476/77 the solidi stream was directed to Gotland which became the primary receiving center for the solidi. The stream continued to Gotland into the reign of Justinian I and single finds later than this do not occur.<sup>11</sup> However, the activity was very much limited after Anastasius, both in the import of coins and in their circulation on Gotland. Eight coins of Justin I and 14 of Justinian I are known whereas 74 of Anastasius have been recorded for Gotland. Moreover, the coins of Anastasius are found all over the island but those of Justin and Justinian are found only in the southern and central parts where the bulk of the solidi finds occur and there are none in the northern area which has revealed a few finds from Leo to Anastasius. It is possible that the activity was interrupted by circumstances which affected the northern part earlier than central and southern Gotland but it is more likely that the activity on the island had declined to the extent that these latest coins did not penetrate the north. Coins dating from before Gotland's primacy are not found in the north either and it is only during the peak of the activity on Gotland that they also penetrated this area.

Archaeological remains attest to a period of warfare on the island similar to but evidently less catastrophic than that on Öland earlier.<sup>12</sup> This is reflected in the hoards, for the evidence of a uniform date of deposit is less apparent than it was for Öland. The two latest hoards close with Justinian I. No. 122 with 25 coins includes 7 of Justinian and one of Theodebert; late issues of Justinian are represented (see PLATES XXIX–XXX). Most of the coins in the hoard are worn or very worn including the latest ones and several have been bent or folded over. The existence of late issues of Justinian I gives a *terminus post quem* of about 540<sup>13</sup> and the degree of wear of these late coins indicates a date of deposit beyond this time and after the import to Scandinavia had ceased. The coin of Theodebert, pierced and refilled, also indicates continued circulation of these coins in Scandinavia. The other late hoard, No. 179a, includes one coin of Justinian (Ostrogothic) in good condition and four of Anastasius: 3 Ostrogothic, all

<sup>11</sup> A solidus of Phocas has been found in Sweden. See p. ix, n. 2.

<sup>12</sup> See Stenberger, *Vallhagar*, p. 1161.

<sup>13</sup> See p. 75, n. 90.

fair, and one second official issue, fair (see PLATE XXIX). On the basis of relative wear this hoard would seem to have been deposited much earlier than No. 122. Both hoards are unusual in their composition and reveal the same lacunae: No. 122 has 8 coins from the period 395–457, no coins of Leo or his western contemporaries (the period of greatest import to Scandinavia), 1 of Zeno, 8 of Anastasius, none of Justin I, 7 of Justinian and 1 of Theodebert; No. 179a also has no coins from 457–474 or from 518–527, but it is a much smaller hoard and gaps would not be so unusual.

Two other hoards close with Justin I. One of these, No. 137b (PLATES XXVII–XXVIII), is the largest Gotland hoard with 82 solidi and its four coins of Justin are very fine, fine (Ostrogothic issues), and two good (second official issue). The Anastasius pieces range from very fine to worn with a concentration of fair and worn coins. The hoard was probably deposited late in the reign of Justin or early in the reign of Justinian. No. 156a, containing 5 coins, includes an Ostrogothic issue of Justin I in good condition. The two solidi of Anastasius in the hoard, both of the second official issue, are fair (PLATE XXVI). Its date of deposit could be approximately the same as that of No. 137b.

Five hoards close with Anastasius but the condition of the latest pieces suggests a period of circulation beyond that time (PLATE XXVI): No. 130b with a Frankish imitation of Anastasius in fair condition; No. 135 with 5 coins of Anastasius—1 Ostrogothic issue, good, and 4 of the first imperial issue, fair; No. 147 with one coin of the second official issue, worn. The condition of these coins corresponds to those in No. 137b. At least the coins of Anastasius in the latter hoard are no more worn than the coins in this group which, accordingly, could have been deposited about the same time. No. 176, also closing with Anastasius, has one worn coin and one very worn coin from the first official issue of that emperor. This hoard too must post-date Anastasius and is perhaps somewhat later than the above group.<sup>14</sup>

<sup>14</sup> The coins of a fifth hoard closing with Anastasius (Find No. 166) are not available. Find No. 136, closing with Basiliscus, is also not available. The smaller multiple finds close with Justin I (Find No. 178), Anastasius (No. 158), Zeno (Nos. 168a and 169) and Theodosius II (No. 179c).



One other hoard remains to be considered: Find No. 6 from Lillön on the Swedish mainland (PLATE XXXI). It was suggested above (pp. 120-22) that this hoard was originally formed on Gotland and was transferred to the Swedish mainland. The hoard contains 10 coins of Anastasius of which 5 are fine to very fine, 1 good, 3 fair and 1 very worn (an imitation of uncertain origin). The last indicates extensive circulation and regardless of the very fine coins in this hoard, it also must be later than Anastasius.

In summary, there would seem to be one period in Gotland's history during which the bulk of the hoards were deposited and which can be identified with attacks on the island. Two later hoards indicate that the import of solidi continued until late in the reign of Justinian I but the coins of one of these, No. 122, must have circulated for some time after the import had ended. With only one other hoard containing a coin of Justinian, it is not possible to state whether further attacks occasioned the deposit of these hoards or whether, having survived the earlier attacks, they were deposited under other circumstances.

At any rate, a period of warfare beginning as early as 500 as suggested by Bolin<sup>15</sup> is not evident nor does it seem possible that all the hoards were deposited after 550 as Werner believed.<sup>16</sup> The majority of the hoards would seem to have been buried about 530 plus or minus a few years, as a result of warfare. That this did not interrupt the import completely is apparent from the existence of later coins, but when the source of supply was cut off late in the reign of Justinian, the activity within Scandinavia, for all practical purposes, came to a close.

#### BORNHOLM (PLATES XXXII-XXXIII)

Five of the six hoards from Bornholm close with Anastasius and beyond this emperor's reign there is a single find of Justin I recorded. The remaining hoard closes with Zeno.<sup>17</sup> The coins of Anastasius in the hoards account for 8 of the 9 recorded specimens from Bornholm

<sup>15</sup> Bolin, 251.

<sup>16</sup> Werner, *Fornvännen* 44, 1949, 272 ff.

<sup>17</sup> Smaller Bornholm hoards close with Zeno (Find No. 214a), Anthemius (No. 224a), Leo I (No. 218) and Honorius (No. 209).

## ÖLAND HOARDS

	87	80a	50	86	90b	115	99
Honorius	I			I		2	3
Valentinian III			I			8	11
Honoria							
Majorian		I		I			4
Libius Severus		I			I	5	2
Anthemius			I	I	I		3
Glycerius					I		
Julius Nepos							
Romulus Augustus							I
Arcadius						I	I
Theodosius II	I	I	I	5		9	23
Eudocia						I	
Pulcheria	I						
Placidia							I
Marcian		I	I	I		2	4
Leo I	3	2	7	4	3	7	26
Leo II/Zeno							I
Zeno							
Basiliscus						I	
B/Marcus							
Leontius							
Anastasius							
Justin I							
Justinian I							
Theodebert							
Uncertain Imitations							
TOTAL	6	6	11	13	6	36	80

## GOTLAND HOARDS

	136	166	130b	135	176	147	6*	156a	137b	179a	122
Honorius	I			2					5		2
Valentinian III							2		5		3
Honorina											
Majorian				I	I				2		
Libius Severus				I			I				
Anthemius	I			I					I		
Glycerius											
Julius Nepos							I		I		
Romulus											
Augustus											
Arcadius									I		
Theodosius II	I		I			I	II	I	14	I	I
Eudocia											
Pulcheria											
Placidia											
Marcian							2		4		2
Leo I	I		3	I	I	2	8		18		
Leo II/Zeno											
Zeno		3	I			I	9		8	2	I
Basiliscus	I						3		I		
B/Marcus											
Leontius											
Anastasius		4	I	5	2	I	10	2	18	4	8
Justin I								I	4		
Justinian I										I	7
Theodebert											I
Uncertain											
Imitations					I			I			
TOTAL	5	7	6	11	5	5	47	5	82	8	25

\* Lillön, Mainland Sweden.

# *Hoard*s

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## BORNHOLM HOARDS

	203	213	212	220	205	219
Honorius			I			I
Valentinian III	2	I	I	I	2	5
Honorio						
Majorian					I	
Libius Severus			3			I
Anthemius	I				I	I
Glycerius			I			
Julius Nepos						I
Romulus Augustus						
Arcadius						
Theodosius II	4	I	9	2	7	8
Eudocia						
Pulcheria						
Placidia						
Marcian			I			
Leo I	4	2	5		I	8
Leo II/Zeno						
Zeno	2	2	5		4	6
Basiliscus						I
B/Marcus						I
Leontius			I			
Anastasius		I	I	2	I	3
Justin I						
Justinian I						
Theodebert						
Uncertain Imitations	I		I	I		
TOTAL	14	7	29	6	17	36

and of these 6 still exist. Their condition is good (1), fair (3) and worn (2), at any rate, no better than the bulk of the Gotland coins.<sup>18</sup> The coins of Zeno also, as a group, are no less worn than most of the Gotland coins which suggests that the deposit of the hoards occurred about the same time as the bulk of the Gotland hoards. The absence of coins of Justin I in the Bornholm hoards is not necessarily evidence that the hoards were deposited before his reign. It was noted in the discussion of the Gotland hoards that after Anastasius the coins were not as widely distributed on Gotland as they had been earlier and it is probable that the limitations of this circulation also cut off the supply to Bornholm.

Bornholm's coins are often believed to have been deposited at an earlier date than the Gotland coins but the condition of the latest pieces makes this difficult to substantiate.<sup>19</sup> Rather, the indications are that they had circulated just as long as the bulk of the Gotland coins, i.e., until late in the reign of Justin or early in the reign of Justinian at which time warfare forced them into the ground.<sup>20</sup>

<sup>18</sup> Only Find No. 122 has coins which are clearly more worn.

<sup>19</sup> Bolin dates the deposit of the Bornholm hoards between 475-525, the Gotland hoards between 500-560; Klindt-Jensen dates the Bornholm hoards to the beginning of the sixth century and the Gotland hoards to the latter part of the sixth.

<sup>20</sup> Klindt-Jensen, *Bornholm*, pp. 147-62 (English summary, pp. 256-7).

## CONCLUSIONS

From each of the above chapters dealing with the statistical data, the identical dies, the condition of the coins, and the hoards, some facts have emerged. Tentative conclusions from any of these chapters were often substantiated further by other chapters and it is at this point that all the isolated facts can be pieced together in a concluding summary.<sup>1</sup>

The solidi were introduced over a period of time beginning in the 450s and continuing until about 550–60, late in the reign of Justinian I. It was a stream in other words, and the contention that all the Öland coins were the result of one mass import, those of Gotland a separate import and so on, as suggested by Arne and others, cannot be substantiated by the evidence. The high percentage of identical dies among the coins of Libius Severus and Leo I must indicate that their import occurred contemporaneous with those reigns and since much later coins appear also, a stream was clearly in operation.<sup>2</sup> Moreover, coins from Öland, which were deposited about 476/77, are often die-linked with Gotland and Bornholm coins which must have arrived with the Öland solidi and which are also associated with later coins. It is quite improbable that Öland's coins are a result of one import and *all* those of Gotland of another quite distinct import.

That the import first began in the 450s is indicated by the earliest examples of identical dies to appear and by the statistical data as well. From the same sources it is apparent that the peak of the import occurred in the 460s under Leo I and Libius Severus. Through the

<sup>1</sup> Some of the conclusions were summarized in a short paper read at the International Numismatic Congress in Rome 1961, subsequently published in the *Atti* ("Contact Between Italy and the Baltic in the Fifth and Sixth Centuries A.D.," *Congresso Internazionale di Numismatica, Roma 1961*, vol. II *Atti*, Rome, 1965, pp. 411–20). Since then new material has been incorporated and certain revisions have been made.

<sup>2</sup> Actually, the presence alone of coins of the late western emperors in the Scandinavian finds, whether or not there are identical dies, would strongly suggest that they arrived soon after being issued. These issues have disappeared from practically every other area on the Continent.

reign of Zeno the identities reveal direct contact with both East and West; after Zeno, the West is the immediate source of supply. Beginning with Justin the import is very much diminished and it ceases completely under Justinian I.

Chronological parallels between the course of the solidi stream and the movements of the Ostrogoths suggest that the Ostrogoths provided the means of contact between the North and South. Shortly after they moved into Pannonia in 454 and became *foederati* of the empire, receiving payments from the emperors, the stream of solidi began in Scandinavia. In 461, the Ostrogoths whose tribute money had been in arrears for a few years previously, revolted and, as a result, received a huge sum of gold from Leo I. This event again is paralleled by the period of greatest import in Scandinavia. In 488 the Ostrogoths left Pannonia and began a conquest of Italy which was accomplished by 493. At this time in the Scandinavian finds there is a noticeable drop in the number of solidi imported and a change in the source of the solidi is also apparent. Under Anastasius, for the first time, western issues almost equal eastern issues and the identities among western issues continue to be common. The Italian issues of the Ostrogoths were the most immediate source of the solidi at this time and were supplemented by other western imitations and official eastern issues in circulation in the West.<sup>3</sup>

When the Ostrogoths left Pannonia in 488, the payments from the East were cut off and this undoubtedly accounts for the decline in the import. The decline is even more in evidence after Anastasius, perhaps because the Ostrogoths were becoming more involved with affairs in Italy, but disturbances in the Baltic may have played a part also. About 476/77 the import to Öland was cut off as a result of the destruction of that island and in the reign of Justin I similar circumstances affected the activity on Gotland and Bornholm. The stream did continue, however, though much diminished until ca. 550–60, late in the reign of Justinian I, at which time the Ostrogoths were defeated and expelled from Italy.

It would seem, therefore, that the Ostrogoths provided the connecting link in the introduction of the solidi to the North and that the main source of their supply of gold was payments: from Marcian

<sup>3</sup> Eastern issues are common in the Italian hoards of this period.

beginning only in 454 and interrupted shortly after that; above all, from Leo I who was forced to make up the payments in arrears and to continue them; and more sporadically from Zeno whose relations with Theodoric fluctuated. The payments ceased when the Ostrogoths moved into Italy. Whether the western emperors participated in these payments is not certain, but that a steady supply of gold from the western mints reached the Ostrogoths in Pannonia seems to be indicated by the statistical data and by the identical dies. Presumably coinage in circulation in the empire at the time of the import contributed to the *solidi* stream.

The presence of a *solidus* of Leontius in a Bornholm hoard is of particular interest in connection with this association of the *solidi* with the Ostrogoths.<sup>4</sup> The coins of this usurper are extremely rare and the existence of one in Scandinavia is remarkable. These coins in all likelihood would be available only briefly and only in the East around Antioch where they were minted. It is tempting to suppose that the Scandinavian specimen was obtained by one of the Ostrogothic troops who were commissioned by Zeno in 484 to put down the revolt of Leontius.

The coins of Valentinian III and Theodosius II, not impressive in their annual representation but substantial nevertheless, require some comment. Perhaps they merely represent coinage in circulation at the time the import began, but the existence of even a few identical dies among them suggests something more than this. For Theodosius II, many of whose issues are dated, two issues account for 77 per cent of the total number of coins of that emperor. They are the *Vot 30* issue of ca. 430 and following with 52 coins and the *Imp 42* issue of 443 with 54 coins. Both are perhaps the largest issues of Theodosius II and thus very common, but the great size of these issues alone requires explanation as well as their ample representation in the Scandinavian activity which began several years after their issue. The parallels between the payments to the Ostrogoths and the *solidi* in Scandinavia along with all the other factors mentioned above would seem to provide conclusive evidence for associating the Ostrogoths with the Scandinavian *solidi*. At the same time, the known data on payments to barbarian tribes reveal other parallels, this time in-

<sup>4</sup> Cat. No. 629; see p. 62, n. 76.



volving the Huns. The Huns began receiving tribute in 424 from Theodosius II, but about 433, when Attila became king, the tribute was doubled to 700 pounds of gold a year and in 443 he secured an immediate payment of 6000 pounds plus an annual payment of 2100 pounds. Valentinian III participated in these payments also. It is possible that these two issues of Theodosius, the one ca. 430 and following and the other in 443, should be associated with these extraordinarily large payments to the Huns. Furthermore, at the time of these payments the Ostrogoths were subject to the Huns but maintained their own political structure under their Hunnic overlords. The Ostrogothic king, Walamir, and the Gepid king were trusted counsellors of Attila and it is likely that they were rewarded for their services to him even though they were his subjects. This would account both for the sizable representation of these issues in the Scandinavian finds and for the presence of identical dies.

Two mid-fifth century emperors are not represented in the Scandinavian solidi: Petronius Maximus who reigned for two months in 455 and Avitus who had a fifteen-month reign in 455–56.<sup>5</sup> The absence of coins of Petronius Maximus is not surprising for the issues of a two-month reign could very easily have escaped the stream of coins exported from Italy. The fifteen month reign of Avitus is another matter, however, and perhaps the absence of these coins in the Scandinavian finds indicates that the stream began after his reign. The alternative explanation is that the stream was of insufficient momentum at this time to have assimilated even a token representation of these coins. The stream was certainly in operation in the reign of Libius Severus (461–465), in fact at its peak, but undoubtedly it had been in operation for some time before that. The decade of the 450s is indicated as the beginning of the import and the political circumstances of the Ostrogoths suggest a date not earlier than 454, but it is impossible to be more precise than this.

Quite independent of the conclusions drawn from the Scandinavian material, the Continental finds indicate a central European

<sup>5</sup> Among the Continental finds, one solidus of Petronius Maximus is included in the hoard of Vedrin (Jacqueline Lallemand, "Vedrin: sous d'or de Magnus Maximus à Anastase," *Études numismatiques* 3, 1965, 109–44), and one of Avitus is known, also from a Belgian find (Nimy-Maisières, RN 1959–60, 150).

route which can be traced from the mouth of the Vistula or the Oder to the middle Danube and Pannonia, the home of the Ostrogoths. The evidence may be summarized as follows. In western Europe (Netherlands, Belgium, France and West Germany), the finds indicate a hiatus in the import of gold for much of the fifth century. The bulk of the material is either early or late. The early hoards close with Honorius, Arcadius, Constantine III, Johannes or Valentinian III and the late hoards indicate a resumption in the import of gold not before Anastasius and later than Anastasius in some places.

The embarkation point of the solidi from the Continent to the Baltic must originally have been the area around the mouth of the Vistula where more than 400 solidi of this period have been found. In the number of coins, the composition of the hoards and the die links,<sup>6</sup> this material shows a close association with the finds of the Baltic islands. In the reign of Anastasius, however, the Vistula material comes to a close, and coins begin arriving in the region of the Oder. Both areas are die-linked with Scandinavian coins and it is probable that the stream bringing the solidi to the North was diverted from the Vistula to the Oder in the time of Anastasius. In the area of the Oder the hoards are late and continue into the reign of Justinian I.

There are two traditional approaches to the Vistula from the Continent:<sup>7</sup> (a) by way of the Dneister and Bug and (b) from Carnuntum on the Danube via the March, through the Carpathian Pass and over the Moravian Plains to the Vistula. That the first of these was not in use during this period is clearly evident from the coin finds. The Russian finds are either early or late, closing with Valentinian III/Theodosius II or beginning with Justinian I.

The second route, through central Europe, is the only possible route identified by coin finds. Finds of the late western emperors and also those of contemporary eastern emperors in Czechoslovakia,

<sup>6</sup> Through the courtesy of Professor Hans Jürgen Eggers I obtained photographs of three Polish finds and 8 Caseburg solidi. The three Polish solidi (1 Theodosius II, 1 Zeno, 1 uncertain imitation) and two of the Caseburg solidi (1 Theodosius II, 1 uncertain imitation) were die-linked with Scandinavian solidi.

<sup>7</sup> M. P. Charlesworth, *Trade-Routes and Commerce of the Roman Empire* (2nd ed., Cambridge, 1926), 176; Olwen Brogan, "Trade Between the Roman Empire and the Free Germans," *JRS* XXVI, 1936, 200ff.; M. Cary, *The Geographic Background of Greek and Roman History* (Oxford, 1949), 281 ff.

Austria, Hungary and Yugoslavia are not overwhelming in number but they occur with sufficient frequency to identify this area as the one through which the route passed.

Earlier writers have often identified more than one route bringing the solidi to the North and have generally assumed that the western coins traveled over one route and the eastern coins over another more easterly route.<sup>8</sup> The only route in evidence from the finds up to Anastasius, however, is the central European one and it is clear from the finds that both eastern and western issues traveled together. No route further to the east or to the west carrying exclusively eastern or western solidi is evident from the coin finds during this period.

Certain changes, however, occurred under Anastasius. The Ostrogoths were settled in Italy by 493 and sometime before the reign of Justin I the northern extremities of this route moved westward from the Vistula to the Oder. There is no apparent connection between the two events.<sup>9</sup> Pannonia continued to be Ostrogothic territory and routes leading to Carnuntum from North Italy could have been utilized.<sup>10</sup> Moreover, there is no indication from the coin finds that this central European route was discontinued after the Ostrogoths were settled in Italy, and the evidence is strong that the Oder was utilized as the outlet to the Baltic. At the same time, however, coins of Anastasius, Justin I and Justinian I began to appear in the West and the possibility of a more westerly route also in operation in the sixth century cannot be ruled out.

Within the Baltic area hitherto unsuspected relationships and facts were discovered. First of all, it was apparent from the distribution of the die-linked coins within Scandinavia, supported by statistical data, that Öland was the primary receiving and distributing center for the solidi up to about 476. Arriving at one or two centers on Öland, the coins were dispersed and circulated on that island, reaching Gotland, Bornholm and the other areas only after they had been circulated on Öland. About 476/77 a disaster on Öland forced the coins into the ground and prevented the further import of solidi.

<sup>8</sup> See chapter on literature for previous discussions of routes.

<sup>9</sup> It is possible that disturbances in the Baltic affected this area as they had the island of Öland earlier and Gotland and Bornholm in the sixth century.

<sup>10</sup> Charlesworth, *op. cit.*, pp. 171 ff.; Cary, *op. cit.*, pp. 281 ff.

The stream was then directed to Gotland which became the primary center, playing much the same rôle as Öland had earlier in receiving and dispersing the solidi. The evidence here too suggests that the coins were distributed on Gotland before reaching the outside areas. Bornholm always had a secondary position in the solidi activity, receiving coins from Öland up to about 476 and from Gotland afterward.

Under Justin and Justinian the distribution of coins on Gotland was restricted to the southern and central parts of the island and this limitation in the activity perhaps cut off the supply to Bornholm also. At any rate, coins of Justin and Justinian did not reach Bornholm, but on the basis of relative wear and a comparison with the Gotland hoards, the hoards would not seem to have been deposited before late in the reign of Justin. The bulk of the Gotland hoards also were deposited at this time and on both islands this was undoubtedly a result of warfare. The stream, very much diminished, continued to Gotland until late in the reign of Justinian, however, and although no imports later than this were made it is evident that the coins continued to circulate there for some time after the import had ended. Evidence for further attacks on Gotland is not apparent from the coin material.

That the coins did circulate on Öland, Gotland and Bornholm is conclusive. There is not only the distribution of the jeweled coins, found almost exclusively outside the Baltic islands, and the distribution of the pierced and refilled coins, found predominantly on Gotland and Öland, but there is also the irrefutable fact that the coins on Öland, deposited about 476/77, show much less wear as a group than the coins of Gotland and Bornholm, deposited several decades later; this is a difference that could not have been produced before the coins arrived in Scandinavia.

If the Öland coins were indeed deposited about 476/77, there is an important implication for the dating of the bracteates. Mackeprang had assumed that the solidi were not imported until just before 500 and that all the hoards, even those on Öland, were deposited in the sixth century.<sup>11</sup> These two assumptions have no basis and since bracteates do appear in the Öland finds it is certain that their

<sup>11</sup> Mackeprang, *op. cit.*, 24.

manufacture must have begun well before 476. Finally, this dating of the Öland hoards should also contribute to a more accurate dating of all other types of jewelry associated with the solidi finds.<sup>12</sup>

Thus far the conclusions have been limited to those made possible by the factual information which the coin material provides. Certain questions regarding the solidi activity have been answered and some unsuspected facts and relationships within the Baltic area revealed. Further interpretations are necessarily speculative but important questions which are unanswered should nevertheless be considered. One important fact seems well established, namely, that the solidi in the Baltic were a result of contact between Scandinavia and the Ostrogoths who were enriched in their dealings with the empire by tribute payments.<sup>13</sup> The nature of this contact and the identification of the carriers, however, is not established. Nor is it known how the activity within the Baltic islands is connected with the activity which brought the coins to the North. All are interrelated problems and each raises many other questions as well.

The carriers must have been the Scandinavians or the Ostrogoths but there seems to be no way of determining with certainty which group it was. The solidi in Scandinavia were a result of contact between the Ostrogoths and Scandinavia and it seems as possible that the Scandinavians crossed the Continent to reach the Ostrogoths as it does that the Ostrogoths traveled back and forth between Scandinavia and their homelands.<sup>14</sup> If the Scandinavians were the carriers, they must have received the solidi either for goods brought or services rendered. It is possible that the Scandinavians found the Ostrogoths ready customers for their wares; it is also possible that they augmented

<sup>12</sup> Discussed recently by B. Jansen and A. N. Zadoks-Josephus Jitta in J. Lafaurie, et. al., "Le trésor de Wieuwerd," 100ff.

<sup>13</sup> Not to exclude payments for military service, ransom for captives, and the like. There were a great many ways by which solidi reached the Ostrogoths, chief among them the tribute payments. Philip Grierson stresses the importance of payments in his article, "Commerce in the Dark Ages: A Critique of the Evidence," *Transactions of the Royal Historical Society* 9, 1959, 123-40. In this particular case the evidence for payments to the Ostrogoths is quite clear. The problem remains, however, of how the solidi then passed from Ostrogothic hands into Scandinavia.

<sup>14</sup> Procopius had conversed with natives of Scandinavia who had come to reside in the South, Procopius, *History of the Wars* (Loeb Classical Library, tr. H. B. Dewing, 5 vols., London, 1914-28), VI.15.9.

the Ostrogothic forces and in this way gained a share of the Ostrogothic wealth. If the Ostrogoths were the carriers, the possible explanations are essentially the same—trade or returning warriors who settled in Scandinavia, bringing with them their savings accumulated in the South. The latter explanation is somewhat difficult to associate with the fact of a stream, however, and it raises another question in regard to the dispersal and circulation of the coins in the Baltic. If the *solidi* represent the savings of Ostrogothic warriors, by some process they must have left the owner's possession and passed into circulation on Öland, Gotland and Bornholm. Moreover, if returning warriors were involved here, they would all seem to have come to Öland until about 476/77 and to Gotland after that. This same difficulty arises if the Scandinavians were the returning warriors also. Trade would seem a more likely answer but it cannot be proved. We may, however, recall the statements of Jordanes<sup>15</sup> about furs which passed through many hands until they reached Rome and of Cassiodorus<sup>16</sup> about amber in the Ostrogothic court. The frequency of amber finds in graves in the South is evidence that the amber trade was still in operation but there is no conclusive way of relating this to the *solidi* traffic.<sup>17</sup>

Within Scandinavia there are many problems. We have established that the *solidi* were circulated on Öland, Gotland and Bornholm but not on the Swedish mainland or Denmark, west of the Sound. What is to be inferred from this? Is this activity independent of the activity which brought the *solidi* to the North? Could it be merely the *availability* of the *solidi* which were recognized as a convenient medium of exchange and as such were utilized in local trade?<sup>18</sup> If so, why were they utilized as money only on Öland, Gotland and Bornholm and not on Mainland Sweden or Denmark, west of the Sound? Was it warfare alone, as some writers maintain<sup>19</sup> that caused the deposit of the hoards on Öland, Gotland and Bornholm and thus

<sup>15</sup> Jordanes, *The Gothic History* (tr. Charles Christopher Mierow, Princeton, 1915), 21.

<sup>16</sup> Cassiodorus, *Variae* (tr. Thomas Hodgkin, London, 1886), v. 2.

<sup>17</sup> Herbert Jankuhn, *Ein Handelsplatz der Wikingerzeit* (Neumünster, 1956), 18.

<sup>18</sup> See Klindt-Jensen, *Bornholm*, op. cit., pp. 142 ff., 163 ff.

<sup>19</sup> Sture Bolin and Joachim Werner; see chapter on literature, pp. 90f. and 94 ff.

preserved them for posterity? And can one assume a similar wealth in other areas also where the absence of warfare has not preserved them for us, as these same writers argue?

One does not have to *assume* a similar wealth in the other areas, however, since it does actually exist, on Mainland Sweden at any rate.<sup>20</sup> But the wealth here is in gold objects and not gold coins. Was there warfare in these parts also? One might infer this from the hundreds of stone forts dating from this period which stretch across Mainland Sweden.<sup>21</sup> Yet, the essential difference is that the wealth on the Mainland is in the form of jewelry and bullion, that on the islands in the form of coins.

The solidi are known to have come from the Ostrogoths but what is the source of the gold on Mainland Sweden? Can the source be the same, that is, can this wealth of gold on Mainland Sweden represent melted down solidi?<sup>22</sup> If so, Mainland Sweden surpasses the islands in importance in the solidi activity. If not, where did it come from?

Öland, Gotland and Bornholm are the major depositories of coin hoards from other periods also. Thousands of imperial denarii from the second century A.D. have been found here and the islands also have the most coin hoards in the Viking Age. Why is this? Was it due merely to warfare again?

In the period of the solidi activity, the primacy of Öland, with all coins being cleared through that island up to 476, has been established and the primacy of Gotland is equally evident after that. Nothing comparable seems to be known about either the earlier or later periods of importation of coins in Scandinavia, other than that Gotland seems to have been the primary depository of coins in both periods. Whether or not all coins were cleared through that island has not been established nor indeed considered.

Thus, many questions remain about events within Scandinavia during this period. The major problems, however, concern the destruction and abandonment of Migration Age settlements on the

<sup>20</sup> Janse (op. cit.) lists all gold finds in Sweden up to 1920.

<sup>21</sup> Mårten Stenberger, *Sweden (Ancient Peoples and Places*, vol. 30, London, n. d.), 137.

<sup>22</sup> See p. 101, n. 3. Although the solidi are uniformly of higher purity than the gold objects, this cannot be taken as evidence that the source of gold was different, for silver could very easily have been alloyed with the gold.

Baltic islands.<sup>23</sup> The archaeological evidence for warfare is well established, but who were the attackers? Among the early writers, the Svear, Götar, Danes or Slavs were associated with one or more of the attacks.<sup>24</sup> Recent writers are more cautious and, although they acknowledge the fact of war, refrain from identifying the attackers. It has also been suggested that this warfare was in the form of piratical raids undertaken by Scandinavians against each other.<sup>25</sup> The stone forts stretched across central Sweden surely suggest some internal difficulties. Moreover, archaeologists have noted cultural analogies between post-550 Gotland and central Sweden, home of the Svear, the traditional conquerors of Gotland in the sagas. It is evident that Gotland suffered attacks in the mid-sixth century, similar to those of Öland earlier, and also that an influx of the Svear occurred on Gotland after this. Although it is not established, there would seem to be a strong possibility that the Svear were the attackers. It seems almost certain that the Lillön hoard found on Mainland Sweden must have been formed on Gotland and thus represents a transferred hoard from Gotland to Uppland on the Swedish mainland. The transfer could have taken place through any of a number of circumstances, but one immediately thinks of booty since there is evidence of war on Gotland and evidence of Svear occupation or influence after that.

This particular question remains unanswered as do many others mentioned above. The general outline of the activity has emerged, however, and details of certain aspects of it revealed. The solidi import was a result of contact between Scandinavia and the Ostrogoths. This became possible after the break up of the Hunnic empire in 454 which not only gave the Ostrogoths their independence and brought them into a direct and profitable contact with the empire but also reopened ways of communication between the North and South. The Huns had been ravaging Continental Europe since the early

<sup>23</sup> The greatest mystery is why these sites (1400 abandoned dwellings on Gotland and 900 on Öland have been identified) were not reoccupied until modern times. When new settlements appeared they were on the coast but even with the population increase during the Vendel and Viking periods, these ruins remained undisturbed. See Stenberger, *Vallhagar*, pp. 1161 ff.

<sup>24</sup> See chapter on literature.

<sup>25</sup> Stenberger, *Vallhagar*, 1171.



fifth century and it was their presence which would seem to have been the leading factor in severing the previous contact between Scandinavia and the South which in the fourth century had also brought some gold into Scandinavia.

The renewed contact with the South resulted in the import of vast numbers of gold solidi and ushered in a veritable Golden Age in Scandinavia. The solidi import continued as long as the Ostrogothic kingdom existed. Its fortunes paralleled those of the Ostrogoths, declining in the late years and ceasing entirely when the Ostrogoths were defeated and expelled from Italy. There is no apparent justification for the recurrent belief that invasions of central Europe by Slavs and Avars in the mid-sixth century severed the contact between the Baltic and the South and brought about the end of the solidi import.<sup>26</sup> The solidi import ended because its source had run dry and internal disturbances in Scandinavia made it impossible to find and exploit alternative sources. It was some centuries later that new profitable contacts laid the foundation for another remarkable period in Scandinavian history, that of the Vikings.

<sup>26</sup> Joachim Werner, *Fornvännen* 44, 1949, 277 ff.; A. N. Zadoks-Josephus Jitta, "Looking Back at 'Frisians, Franks and Saxons'," *Bulletin van de vereeniging tot bevordering der kennis van de antieke beschaving te 's-Gravenhage* XXXVI, 1961, 49.

## APPENDIX



## APPENDIX: FIND-LIST

SWEDEN — MAINLAND      sn. = socken (parish)

- 1.<sup>1</sup> *Medelpad*, Skön sn.  
1 sol. Zeno found in a grave mound, 1807; no longer available.  
Montelius 117; Hauberg 339; Janse 228; Bolin 131.3.
2. *Medelpad*, Timrå sn., Skottgård  
2 sol.: 1 Theodosius II<sup>2</sup> and 1 Zeno found at different times in  
same place, in a pile of stones, 1866 and 1906 (SHM 3562,  
12934). Montelius 118; Hauberg 336; Janse 229, 230; Bolin  
131.2a, b; Enqvist, *Medelpad* 1949, 101. Cat. Nos. 317 and 566.
3. *Gästrikland*, Hedesunda sn., Rangsta no. 9  
1 sol. Leo I found with 23 gold objects while digging (SHM  
14045). Janse 227; Bolin 131.1. Cat. No. 405.
4. *Uppland*, Alunda sn., Jortslunda  
1 sol. Leo I found on surface of ground, 1851 (SHM 1692). Mon-  
telius 119; Hauberg 337; Janse 224; Bolin 132.6. Cat. No. 400.
5. *Uppland*, Ekerö sn., Kaggeholm  
21 sol.: 4 Theodosius II, 1 Marcian, 2 Leo I, 11 Zeno, 2 Anasta-  
sius and 1 uncertain found with 2 gold arm bands, 1783. Ac-  
cording to Montelius, 18 coins were deposited in the SHM and  
3 in the LUHM; only the latter are identified (LUHM 19672 f.).  
Montelius 120; Hauberg 326; Janse 222; Bolin 132.7; Mosser  
44. Cat. Nos. 298, 309 and 585.
6. *Uppland*, Ekerö sn., Lillön  
47 sol.: 2 Valentinian III, 1 Libius Severus, 1 Julius Nepos, 11  
Theodosius II, 2 Marcian, 8 Leo I, 9 Zeno, 3 Basiliscus and 10  
Anastasius found with a gold ring, 1961 (SHM 26683). *SM* 11

<sup>1</sup> Perhaps another gold coin was found in this parish also (Montelius 117 1/2).

<sup>2</sup> Cat. No. 317 (Theodosius II) is labelled "Okänd f. ort. Utan inv. nr." but it  
is most certainly the coin described in the archives under Inv. No. 3562 and  
illustrated in Montelius, pl. I, no. 2.

(Oct. 1961), 49; *NNÄ* 1962, 281f. Cat. Nos. 31, 74, 148, 177, 226, 242, 252, 279, 280, 281, 325, 326, 327, 328, 338, 356, 374, 391, 421, 438, 477, 478, 482, 513, 518, 564, 574, 575, 589, 590, 601, 610, 611, 618, 621, 622, 626, 641, 647, 678, 696, 697, 701, 702, 705, 720 and 721.

7. *Uppland*, Norrsunda sn., Viggeby  
1 sol. Arcadius found 1909 (SHM 13774). Janse 225; Bolin 132.8. Cat. No. 189.
8. *Uppland*, Vendel sn., Husby  
1 sol. Basiliscus found during excavations at Ottarshögen (SHM 15847). Janse 226; Bolin 132.11. Cat. No. 620.
9. *Södermanland*, Grödinge sn., Västra Bröta  
1 sol. Zeno found in a field, 1849 (SHM 1521). Montelius 121; Hauberg 338; Janse 223; Bolin 132.5. Cat. No. 547.
10. *Södermanland*, Salem sn., Vitsand  
1 sol. Theodosius II; not acquired. Janse 219; Bolin 132.4.
11. *Södermanland*, Torpa sn., Västra Säby  
1 sol. Justinian I (pierced) found while plowing, 1864 (SHM 3507); not among coins examined at SHM. Montelius 236; Hauberg 340; Janse 221; Bolin 132.6.
12. *Södermanland*, Ytterselö sn., Tuna  
1 barbaric sol. Theodosius II (?)<sup>3</sup> found in a grave mound (SHM 9435); not among coins examined at SHM. Salin 63; Janse 220 (fig. 11); Bolin 132.3. Cat. No. 753 (description obtained from illustration in Janse).
13. *Västergötland*, Fristad sn., Slättäng  
1 sol. Zeno found with various gold objects, 1878 (SHM 6266). Salin 47; Janse 218; Bolin 133.4. Cat. No. 561.
14. *Västergötland*, Hol sn.  
1 sol. Theodosius II found 1879 (SHM 6361). Salin 28; Janse 217; Bolin 133.2. Cat. No. 297.

<sup>3</sup> The coin cannot be attributed definitely as an imitation of Theodosius II and is listed under Uncertain Imitations in the catalogue.

15. *Småland*, Älmeboda sn., Guleboda  
1 sol. Theodosius II found while plowing, 1854 (SHM 2085).  
Montelius 123; Hauberg 335; Janse 216; Bolin 143.2. Cat. No. 322.
16. *Småland*, Hossmo sn., Rinkaby  
1 sol. Romulus Augustus found 1850 (SHM 1606). Montelius  
124; Hauberg 332; Janse 207; Bolin 143.7. Cat. No. 186.
17. *Småland*, Hylletofta sn., Holmåkra Dragontorp  
1 sol. Honorius found on surface of ground about 1807 (SHM  
1192). Montelius 122; Hauberg 330; Janse 215; Bolin 143.3.  
Cat. No. 11.
18. *Småland*, Lofta sn., Hässelstad  
9 sol.: 1 Honorius, 1 Valentinian III, 3 Theodosius II, 1 Marcian,  
2 Leo I and 1 uncertain imitation found in a gravel pit, 1905  
(SHM 12457). Janse 208 (lists 7 coins); Bolin 143.4. Cat. Nos.  
17, 48, 247, 267, 271, 357, 437, 489 and 754.
19. *Kalmar län*  
a 1 barbaric sol. (SHM 673); not among coins examined at  
SHM. Montelius 125; Hauberg 341; Janse 214.  
b 3 sol.: 1 Valentinian III, 1 Julius Nepos and 1 Anastasius  
found at different times in Kalmar län before 1857 (SHM  
2345). Montelius 126; Hauberg 325; Janse 210. Cat. Nos. 36,  
182 and 666.  
c 1 sol. Anthemius found in a field, vicinity of Kalmar, 1872  
(SHM 4967). Salin 23; Hauberg 331; Janse 209; Bolin 143.5e.  
Cat. No. 162.  
d 2 sol. Theodosius II found at different times; not acquired.  
Montelius 127; Hauberg 333-334; Janse 212-213; Bolin  
143.5f.  
e "Some coins of Theodosius II" found during demolition of  
the old castle of Kalmar about 1690; no longer available.  
Montelius 128; Janse 211.
20. *Blekinge*, Augerum sn., Tjörkö  
a 1 sol. Theodosius II, with loop, found with 4 gold bracteates,  
1817; not acquired. Montelius 129; Hauberg 156; Janse 203;  
Bolin 145.3a.

- b 1 sol. Theodosius II found 1838; not acquired. Montelius 129½; Hauberg 157; Janse 204; Bolin 145.3b.
21. *Blekinge*, Ramdala sn.  
1 sol. Anastasius (SHM 11326). Janse 205; Bolin 145.2. Cat. No. 656.
22. *Blekinge*, Torhamn sn., Attanäs no. 12  
1 sol. Julius Nepos found 1865 (SHM 3377). Montelius 130; Hauberg 150; Janse 206; Bolin 145.1. Cat. No. 178.
23. *Skåne*, Brunnby sn., Skättekärr  
1 sol. Theodosius II found while plowing, 1867 (SHM 3678). Later, a gold bracteate was found in same field (SHM 7752). Montelius 133; Hauberg 153; Janse 189; Bolin 144.22. Cat. No. 324.
24. *Skåne*, Fjärestad sn., Gantofta  
1 sol. Theodosius II, with loop, found with 5 gold bracteates, a gold ring and 2 gold fragments (SHM ?); not among coins examined at SHM. Kindström, *Meddelanden från Lunds universitets historiska museum* 1952, 176–90; Olsson, *Fornvännen* 47, 1952, 276–81.
25. *Skåne*, Hammenhög sn., Hammenhög no. 25  
1 sol. Zeno found in a field, 1867 (SHM 3677). Montelius 137; Hauberg 162; Janse 190; Bolin 144.6. Cat. No. 587.
26. *Skåne*, Hörup sn., Gyllerup  
24 sol. of Julius Nepos, Leo I, Zeno and Anastasius, found 1870; only 1 coin of Leo can be identified (LUHM 19672 c). Montelius (1872) 75.19; Janse 192, 202; Bolin 144.9. Cat. No. 461.
27. *Skåne*, Norrvidinge sn., Norrvidinge  
1 sol. Leo I found 1871 (SHM 4565). Montelius (1872) 74.16; Hauberg 160; Janse 194; Bolin 144.18. Cat. No. 386.
28. *Skåne*, Önnestad sn., Önnestad  
1 sol. Theodosius II found before 1833 (LUHM 19672 b). Montelius 132; Hauberg 151; Janse 199; Bolin 144.24. Cat. No. 262.

29. *Skåne*, Östra Vemmenhög sn., Östra Vemmenhög  
1 sol. Zeno found 1824; not acquired. Montelius 135; Hauberg 161; Janse 198; Bolin 144.25.
30. *Skåne*, Räng sn., Kämpinge  
1 sol. Leo I found near sea, 1840 (LUHM 19672 e). Montelius (1872) 75.18; Hauberg 158; Janse 195; Bolin 144.14. Cat. No. 385.
31. *Skåne*, Rörsjön (near Malmö)  
1 sol. Theodosius II (pierced) found 1870; not acquired. Montelius (1872) 74.17; Hauberg 154; Janse 193; Bolin 144.17.
32. *Skåne*, St. Ibb sn., Ven  
1 sol. Leo I found before 1845 (LUHM 19672 d). Montelius 138; Hauberg 159; Janse 191; Bolin 144.7. Cat. No. 394.
33. *Skåne*, Tottarp sn., Djurslöv no. 7  
1 sol. Theodosius II found 1843 (SHM 1083). Montelius 134; Hauberg 152; Janse 196; Bolin 144.3. Cat. No. 257.
34. *Skåne*, near Ystad  
1 barbaric sol. Anastasius; not acquired. Montelius 136; Hauberg 163; Janse 197; Bolin 144.23.
35. *Skåne*  
a 1 sol. Anthemius acquired 1809 (SHM 390). Montelius 131; Hauberg 149; Janse 200; Bolin 144.26. Cat. No. 161.  
b 1 sol. Theodosius II (with loop); no longer available (?).<sup>4</sup>  
Montelius (1872) 74.15; Hauberg 155; Janse 201; Bolin 144.27.

## SWEDEN — ÖLAND

36. Alböke sn., Ormöga no. 1  
1 sol. Anthemius found on surface of ground 1857 (SHM 2375). Montelius 181; Hauberg 220; Janse 1; Bolin 139.1; Stenberger 276. Cat. No. 153.

<sup>4</sup> Janse places it in the National Museum, Copenhagen, but it cannot be identified there.



37. Alböke sn., Stora Haglunda  
1 sol. Majorian, part of a Viking hoard (SHM 18287); not among coins examined at SHM. Stenberger 276.
38. Algutsrum sn., Alledal  
1 sol. Theodosius II found in a field, 1889 (SHM 8639). Salin 33; Hauberg 238; Janse 2; Bolin 139.3; Stenberger 276. Cat. No. 230.
39. Algutsrum sn., Holmetorp  
1 sol. Valentinian III found in a field, 1890 (SHM 8797). Salin 9; Janse 3; Bolin 140.4; Stenberger 276. Cat. No. 44.
40. Algutsrum sn., Övetorp  
a 1 sol. Libius Severus found in a field, 1871 (SHM 4546). Montelius (1872) 76.24; Hauberg 213; Janse 6; Bolin 140.5 Aa; Stenberger 276. Cat. No. 123.  
b 1 sol. Majorian found in a field, 1876 (SHM 5784). Salin 10; Hauberg 204; Janse 5; Bolin 140.5 Ab; Stenberger 276. Cat. No. 101.  
c 1 sol. Libius Severus found on surface of ground at Övetorp no. 1, 1886 (SHM 7889). Salin 14; Janse 7; Bolin 140.5 Ac; Stenberger 276. Cat. No. 124.
41. Algutsrum sn., Stora Hult  
1 sol. Libius Severus found 1946 (SHM 23508). *NNÄ* 1947, 192. Cat. No. 143.
42. Algutsrum sn., Törnbotten  
2 sol. (or 3?)<sup>5</sup> Leo I found at different times but in same place, 1872 (SHM 4783). Salin 43, 44; Hauberg 191; Janse 4; Bolin 140.5; Stenberger 276. Cat. Nos. 452, 511 and 534.
43. Algutsrum sn.  
1 sol. Leo II and Zeno found while plowing before 1846 (SHM 1317); Montelius 160; Hauberg 259; Janse 8; Bolin 139.2; Stenberger 276. Cat. No. 545.

<sup>5</sup> Archives list only 2 solidi of Leo and the descriptions fit Nos. 534 (MD) and 511 (off. l); No. 452 (off. E), however, is also identified in the trays of the coin cabinet as Inv. 4783.

44. Böda sn., Fagerum  
1 sol. Theodosius II found 1882 (SHM 7102). Salin 32; Hauberg 237; Janse 10; Bolin 140.7; Stenberger 276. Cat. No. 291.
  45. Böda sn., Hunderum  
1 sol. Marcian found 1919 (SHM 16364). Janse 11; Bolin 140.8; Stenberger 276. Cat. No. 365.
  46. Böda sn., Kyrketorp  
a<sup>6</sup> 1 sol. Theodosius II found while digging in ground, 1848 (SHM 1475). Montelius 186; Hauberg 228; Janse 12; Bolin 140.9a; Stenberger 276. Cat. No. 231.  
b 3 sol.: 2 Theodosius II and 1 Zeno (and perhaps others also) found separately but in same field (Kyrketorp no. 2), 1861–62 (SHM 2880, 2902, 2993). Montelius 187; Hauberg 189; Janse 13; Bolin 140.9b; Stenberger 276. Cat. Nos. 246, 292 and 599.
  47. Böda sn., Melböda  
a 1 sol. Marcian found while plowing, 1848 (SHM 1503). Montelius 185; Hauberg 240; Janse 15; Bolin 140.10a; Stenberger 276. Cat. No. 361.  
b 1 sol. Theodosius II found in a field, 1882 (SHM 6977). Salin 27; Hauberg 236; Janse 14; Bolin 140.10b; Stenberger 276. Not among coins examined at SHM but a coin of Theodosius II with this find-place exists in the Kalmar Museum (Kalmar 25.381). Cat. No. 294.  
c 1 sol. Anastasius (SHM 20784). Cat. No. 650.
  48. Böda sn., Norrböda  
1 sol. Majorian found in a field, 1877 (SHM 6028). Salin 11; Hauberg 205; Janse 16; Bolin 140.11; Stenberger 276. Cat. No. 102.
  49. Böda sn., Svartvik  
1 sol. Leo I found with a gold ring, 1900 (SHM 11178). Janse 17; Bolin 140.12; Stenberger 276. Not among coins examined at SHM but a coin of Leo I with this find-place exists in the Kalmar Museum (Kalmar 25.383). Cat. No. 469.
- Archives list find-place as Norrböda.

50. Bredsätra sn., Präststommen  
 11 sol.: 1 Valentinian III, 1 Anthemius, 1 Theodosius II, 1 Marcian and 7 Leo I, found with 2 gold and 2 silver rings in a field under a flat stone, 1814; not acquired. Montelius 171;<sup>7</sup> Montelius (1872) 81.25; Hauberg 187; Janse 9; Bolin 140.6; Stenberger 276.
51. Egby sn., Egby  
 a 1 sol. Anthemius found while plowing at Egby no. 4 in 1884 (SHM 7503). Salin 25; Hauberg 223; Janse 19; Bolin 140.13b; Stenberger 276. Cat. No. 166.  
 b 1 sol. Valentinian III found 1899 (SHM 10870). Janse 18; Bolin 140.13a; Stenberger 276. Cat. No. 72.
52. Egby sn., Laxeby  
 1 sol. Anthemius found in a field, 1893 (SHM 9331). Salin 22; Janse 20; Bolin 140.14; Stenberger 276. Cat. No. 159.
53. Föra sn., Ingelstad  
 2 sol.: 1 Honorius and 1 Theodosius II found with a gold spiral ring and finger ring. *NNÄ* 1956, 233; not among coins examined at SHM.
54. Föra sn., Östra Greda  
 1 sol. Theodosius II found while plowing, 1924 (SHM 17679). Bolin 140.15; Stenberger 276. Cat. No. 290.
55. Föra sn., Uggletorp  
 a 1 sol. Leo I (SHM 24490). Cat. No. 406. See *NNÄ* 1952, 161 which also lists a coin of Majorian. In the coin cabinet of the SHM there was a box labeled Majorian, Inv. 24572, but the coin was missing. The archives list, under Inv. 24572, a coin of Majorian and a barbaric sol. of Valentinian III listed below.  
 b 1 barbaric sol. Valentinian III (SHM 24572). Cat. No. 91.
56. Gårdby sn., Gårdby  
 a 1 sol. Leo II and Zeno found at Gårdby no. 1 in 1907 (SHM 13221). Janse 23; Bolin 140.20a; Stenberger 278. Cat. No. 542.

<sup>7</sup> Montelius reports x coins of Petronius Maximus and omits coin of Marcian, but this attribution is corrected in Montelius (1872), p. 81.

- b 1 fragment of a sol. of Valentinian III found at Gårdby no. 3 while plowing, 1910 (SHM 14198). Janse 24; Bolin 140.20b; Stenberger 278. Cat. No. 79.
57. Gårdby sn., Södra Näsby  
1 sol. Theodosius II (SHM 22553). *NNA* 1941, 257. Cat. No. 234.
58. Gärdslösa sn., Högtomta  
1 sol. Theodosius II found 1856 (SHM 2253). Montelius 167; Hauberg 230; Janse 25; Bolin 140.23; Stenberger 278. Cat. No. 260.
59. Gärdslösa sn., Norra Bägby  
1 sol. Leo I. Stenberger 278 (Öl. forngård, Borgholm).
60. Gärdslösa sn., Norra Gärdslösa  
1 sol. Libius Severus found in a field, 1913 (SHM 14945). Bolin 140.24; Stenberger 278. Cat. No. 140.
61. Gärdslösa sn., Runsberga no. 6  
1 sol. Theodosius II found while plowing, 1853 (SHM 1988). Montelius 166; Hauberg 229; Janse 26; Bolin 140.25; Stenberger 276. Cat. No. 215.
62. Gärdslösa sn., Sörby tall  
4 sol.: 1 Majorian, 2 Theodosius II and 1 Eudocia<sup>8</sup> found at different times but in same field, 1864–75 (SHM 3279, 3608, 4971, 5626). Montelius 169, 170; Salin 12, 30; Hauberg 185, 231, 234, 239; Janse 27; Bolin 140.26; Stenberger 278. Cat. Nos. 110, 283, 296 and 333.
63. Gärdslösa sn., Tjusby  
3 sol.: 2 Valentinian III and 1 Libius Severus found at different times but in same field (SHM 6239, 7411, 19745). Salin 6, 19; Hauberg 199, 217; Janse 28, 29; Bolin 140.27a, b; Stenberger 278. Cat. Nos. 43, 67 and 117.
64. Glömminge sn., Brostorp no. 4  
1 sol. Valentinian III (Kalmar 24.706). Cat. No. 78.

<sup>8</sup> Eudocia usually listed as Eudoxia.

65. Glömminge sn., Isgärde  
1 sol. Theodosius II found in a field, 1843 (SHM 1047). Montelius 163; Hauberg 227; Janse 21; Bolin 140.16; Stenberger 278. Cat. No. 306.
- 66.<sup>9</sup> Glömminge sn., Österskog  
1 sol. Zeno found 1856 (SHM 2269). Montelius 162; Hauberg 262; Janse 42; Bolin 141.35; Stenberger 278. Cat. No. 603.
67. Gräsgård sn., Eketorp  
1 sol. Leo I found with a gold finger ring and a gold spiral in a field, 1845 (SHM 1227). Montelius 141; Hauberg 246; Janse 22; Bolin 140.18; Stenberger 278, 286. Cat. No. 462.
68. Gräsgård sn., Össby no. 1  
1 sol. Theodosius II found near site of prehistoric house foundation, 1925 (SHM 17902); a gold spiral was found in same field 20 years earlier (SHM 8720). Bolin 140.19A; Stenberger 278. Cat. No. 259.
69. Gräsgård sn.  
1 sol. Libius Severus; not acquired. Stenberger 278.
70. Högby sn., Dödevi  
a 1 sol. Leo I found while plowing, 1845 (SHM 1211). Montelius 184; Hauberg 245; Janse 33; Bolin 141.30; Stenberger 278. Cat. No. 535.  
b 1 sol. Libius Severus found while plowing at Dödevi no. 3. 1879 (SHM 6465). Salin 17; Hauberg 215; Janse 31; Bolin 141.30; Stenberger 278. Cat. No. 139.  
c 1 sol. Theodosius II found while plowing, 1894 (SHM 9828). Janse 32; Bolin 141.30; Stenberger 278. Cat. No. 241.
71. Högby sn., Munketorp no. 4  
1 sol. Zeno found in a field, 1870 (SHM 4451). Montelius (1872) 82.27; Hauberg 264; Janse 34; Bolin 141.31; Stenberger 278. Cat. No. 581.

<sup>9</sup> Sometimes listed as Högsrum sn.

72. Högby sn., Sandby no. 10  
4 sol.: 1 Valentinian III, 1 Anthemius, 1 Glycerius and 1 Theodosius II found at different times but in same field, 1879–1900 (SHM 6386, 8856, 10674, 11222). Salin 24, 29; Hauberg 224, 235; Janse 35–38; Bolin 141.32; Stenberger 278. Cat. Nos. 47, 165, 172 and 323.
73. Högby sn., Skriketorp  
1 sol. Arcadius found while plowing, 1850 (SHM 1613). Montelius 183; Hauberg 226; Janse 39; Bolin 141.33; Stenberger 280. Cat. No. 190.
74. Högsrum sn., Mossberga  
1 sol. Honorius found ca. 1820; not acquired. Montelius 165; Hauberg 194; Janse 40–41; Bolin 141.34; Stenberger 280.
75. Högsrum sn., Rönnerum  
1 sol. Leo I found on site of prehistoric house foundation, 1931 (SHM 19779). A gold spiral was found in same place 70 years earlier. Archives state that coin was deposited in the Kalmar museum but it is actually in the SHM. Stenberger 280. Cat. No. 490.
76. Hulterstad sn., Skärlöv  
1 sol. Valentinian III found while breaking stone on a mound, 1841 (SHM 976). Montelius 144; Hauberg 195; Janse 30; Bolin 141.29; Stenberger 278. Cat. No. 94.
77. Köping sn., Äsa  
1 sol. Leo I (SHM ?); not among coins examined at SHM. *NNA* 1944, 265.
78. Köping sn., Källingemöre  
a 1 sol. Leo I found 1852 (SHM 1872). Montelius 174; Hauberg 248; Janse 43; Bolin 141.37a; Stenberger 280. Cat. No. 487.  
b 1 sol. Leo I found while plowing at Källingemöre no. 2, 1895 (SHM 9988). Janse 44; Bolin 141.37b; Stenberger 280. Cat. No. 464.

79. Köping sn., Kullen  
 1 sol. Julius Nepos found in a field, 1924 (SHM 17479); a gold object was found earlier in same place (SHM 17478). Bolin 141.36; Stenberger 280 (both list 2 coins of Julius Nepos). Cat. No. 180.
80. Köping sn., Ramsätra  
 a 6 sol.: 1 Majorian, 1 Libius Severus, 1 Theodosius II, 1 Mar-  
 cian and 2 Leo I found at different times but in same field,  
 Ramsätra no. 2, 1853–1913 (SHM 1983, 4402, 6616, 8887,  
 11879, 15048). Montelius 173; Montelius (1872) 82.26; Salin  
 15, 45; Hauberg 203, 216, 242, 258; Janse 45–48, 51; Bolin  
 141.39; Stenberger 280. Cat. Nos. 107, 125, 212, 363, 529 and  
 530.  
 b 1 sol. Leo I found at Ramsätra no. 1 (SHM 22450). *NNA*  
 1941, 257. Cat. No. 424.
81. Köping sn., Salomonstorp  
 1 sol. Leo I found 1883 (SHM 7362); a gold spiral found in same  
 place earlier was not acquired. Salin 40; Hauberg 257; Janse  
 49; Bolin 141.40; Stenberger 280. Cat. No. 463.
82. Köping sn.  
 2 sol.: 1 Honorius and 1 Valentinian III, found together before  
 1828 (Kalmar?).<sup>10</sup> Montelius 172; Hauberg 184; Janse 50; Bolin  
 141.38; Stenberger 280.
83. Langlöt sn., Ismantorp  
 1 sol. Leo I found while digging in a field, 1851 (SHM 1671).  
 Montelius 164; Hauberg 247; Janse 53; Bolin 141.41; Stenber-  
 ger 280. Cat. No. 436.
84. Löt sn., Arbelunda no. 6  
 1 sol. Romulus Augustus found in a field, 1869 (SHM 3860).  
 Montelius 180; Hauberg 225; Janse 54; Bolin 141.42; Sten-  
 berger 280. Cat. No. 185.

<sup>10</sup> Montelius et. al. give the Kalmar Museum as the location but it was not  
 among coins I examined from Kalmar.

85. Löt sn., Hjärpestad  
2 sol.: 1 Julius Nepos and 1 Romulus Augustus found in same field at different times, 1893–95 (SHM 9458, 9987). Salin 26; Janse 55, 56; Bolin 141.43a, b; Stenberger 280. Cat. Nos. 176 and 188.
86. Löt sn., Spångebro, Hjärpestad no. 2  
13 sol.: 1 Honorius, 1 Majorian, 1 Anthemius, 5 Theodosius II, 1 Marcian and 4 Leo I found with various gold and silver objects at different times but in same field (SHM 18286, 18620, 18621, 18983). Stenberger 280. Cat. Nos. 9, 104, 163, 194, 254, 268, 314, 329, 362, 472, 498, 522 and 526.
87. Löt sn., Valsnäs no. 2  
5 (or 6?)<sup>11</sup> sol.: 1 Honorius, 1 Theodosius II, 1 Pulcheria, 2 (or 3) Leo I found in same field under a flat stone, 1854–69 (SHM 2103, 2355, 2843, 2872, 4098 and Kalmar 4098). Montelius 175–179; Hauberg 188, 254; Janse 57; Bolin 141.45; Stenberger 280. Cat. Nos. 13, 244, 334, 468, 495 and 499.
88. Mörbylånga sn., Bårby  
a 1 sol. Leo I found while plowing, 1864 (SHM 3213). Montelius 145; Hauberg 252; Janse 70; Bolin 141.46; Stenberger 280. Cat. No. 454.  
b 1 sol. Justin I<sup>12</sup> found in a field, 1906 (SHM 12723). Janse 71; Bolin 141.47; Stenberger 282. Cat. No. 722.
89. Norra Möckleby sn., Bläsinge  
1 sol. Libius Severus (Kalmar 14.347). Cat. No. 120.
90. Norra Möckleby sn., Bostorp  
a 1 sol. Valentinian III found in a field, 1855 (SHM 2134). Montelius 157; Hauberg 196; Janse 58; Bolin 141.48; Stenberger 282. Cat. No. 71.

<sup>11</sup> The archives for Inv. No. 4098 state that the coin was deposited in the Kalmar Museum and the description of the coin (off. H) agrees with the coin in Kalmar (Kalmar 4098), No. 495 in this catalogue; the origin of the coin in the SHM, also identified as Inv. 4098 but of off. S (Cat. No. 468) is therefore uncertain.

<sup>12</sup> Janse and Bolin erroneously list the coin as Justinian I.



- b 6 sol.: 1 Libius Severus, 1 Anthemius, 1 Glycerius and 3 Leo I found with a gold ring and 3 C-bracteates (Kalmar 23.575.5-10). Hofrén, *Kalmar läns fornminnesförening. Meddelanden* 40, 1952, 81-84. Cat. Nos. 133, 150, 173, 422, 434 and 500.  
c 1 sol. Theodosius II (Kalmar 25.382). Cat. No. 345.

91. Norra Möckleby sn., Bröttorp  
1 sol. Leo I found while plowing, 1886 (SHM 7952). Salin 41; Janse 59; Bolin 141.49; Stenberger 282. Cat. No. 539.
- 92.<sup>13</sup> Norra Möckleby sn., Gunnarstorp  
a 1 sol. Leo I found while plowing, 1855 (SHM 2202). Montelius 159; Hauberg 249; Janse 64; Bolin 142.50e; Stenberger 282. Cat. No. 447.  
b 1 sol. Zeno found at Gunnarstorp no. 4, 1871 (SHM 4574). Montelius (1872) 76.23; Hauberg 265; Janse 62; Bolin 142.50c; Stenberger 282. Cat. No. 569.  
c 1 sol. (or 2?)<sup>14</sup> Valentinian III found in a field, 1881 (SHM 6826). Salin 5; Hauberg 201; Janse 60; Bolin 141.50a; Stenberger 282. Cat. Nos. 64 and 68.  
d 1 sol. Leo I found while plowing, 1901 (SHM 11447). Janse 61; Bolin 142.50b; Stenberger 282. Cat. No. 432.  
e 1 sol. Theodosius II (pierced) found while plowing at Gunnarstorp no. 2 (SHM 13146). Janse 63; Bolin 142.50d; Stenberger 282 (Hälsinglands fornminnessällskap, Hudiksvall).
93. Norra Möckleby sn., Norra Möckleby  
a 1 sol. Leo I found 1857 (SHM 2374). Montelius 158; Hauberg 250; Janse 65; Bolin 142.51a; Stenberger 282. Cat. No. 485.  
b 1 sol. Leo I found at "Pastorsbostället" (SHM 5185). Salin 42; Hauberg 256; Janse 65; Bolin 142.51b; Stenberger 282. Cat. No. 451.

<sup>13</sup> Stenberger states that Nos. 92 a-e are possibly from one hoard but the archives indicate that Nos. 92 b and e at least are from two different fields.

<sup>14</sup> Archives list only one coin but there are two coins in the SHM identified as Inv. 6826; Cat. No. 64 is from a box in the trays of the coin cabinet and bears this inventory number while No. 68 is from the display case and has the number written in ink on the coin.

94. Persnäs sn., Lundeby  
1 sol. Valentinian III found while plowing, 1857 (SHM 2388).  
Montelius 182; Hauberg 198; Janse 72; Bolin 142.52; Stenberger 282. Cat. No. 70.
95. Räpplinge sn., Räpplinge  
1 sol. Zeno found in a field near the church, 1854 (SHM 2075).  
Montelius 168; Hauberg 261; Janse 73; Bolin 142.53; Stenberger 282. Cat. No. 563.
96. Resmo sn., Gyng  
a 1 sol. Libius Severus found in a field, 1851 (SHM 1664).  
Montelius 149; Hauberg 208; Janse 74; Bolin 142.54a; Stenberger 282. Cat. No. 138.  
b 1 sol. Libius Severus found at Gyng no. 4 while plowing,  
1870 (SHM 4310). Montelius (1872) 75.20; Hauberg 211;  
Janse 75; Bolin 142.54b; Stenberger 282. Cat. No. 128.
97. Resmo sn., Lilla Frö  
1 sol. Justinian I found in a field, 1921 (SHM 16690). Bolin  
142.55; Stenberger 282. Cat. No. 744.
98. Runsten sn.  
1 sol. Theodosius II found while digging in a field, 1868 (SHM  
3842). Montelius 161; Hauberg 232; Janse 76; Bolin 142.57;  
Stenberger 282. Cat. No. 344.
- 99.<sup>15</sup> Sandby sn., Åby no. 10  
80 sol.: 3 Honorius, 11 Valentinian III, 1 Galla Placidia, 4  
Majorian, 2 Libius Severus, 3 Anthemius, 1 Romulus Augustus,

<sup>15</sup> The coins from these seven separate finds have been mixed together and there is no way of distinguishing them except in those instances where only one coin of a particular emperor is represented. The bulk of the hoard, however, belongs to one find, SHM 23664, and consists of 72 solidi: 2 Honorius, 10 Valentinian III, 1 Galla Placidia, 4 Majorian, 1 Libius Severus, 3 Anthemius, 1 Romulus Augustus, 22 Theodosius II, 4 Marcian, 23 Leo I and 1 Leo II and Zeno.

There is a discrepancy in the tabulation in the archives which accounts for 10 solidi of Valentinian III and 24 of Theodosius II when in fact there are 11 solidi of Valentinian and 23 of Theodosius.

The archives record that SHM 24342 (Theodosius II) was found at Åby no. 1 and thus this coin perhaps does not belong with this hoard.

1 Arcadius, 23 Theodosius II, 4 Marcian, 26 Leo I and 1 Leo II and Zeno; bulk of hoard was discovered in 1946 (SHM 11036, 21044, 21045, 21046, 23600, 23664, 24342). Janse 82; Bolin 142.62; Stenberger 282; *NNA* 1936, 233; 1942, 245; 1947, 192; 1948, 167–68. Cat. Nos. 7, 19, 20, 40, 46, 49, 50, 56, 57, 58, 59, 60, 84, 90, 100, 109, 113, 114, 115, 132, 154, 157, 169, 187, 193, 202, 216, 217, 220, 222, 233, 237, 240, 253, 263, 272, 276, 277, 278, 285, 286, 287, 299, 308, 319, 335, 339, 346, 347, 355, 360, 375, 376, 378, 379, 380, 384, 387, 389, 407, 408, 409, 410, 416, 419, 420, 429, 435, 441, 442, 443, 444, 450, 467, 470, 471, 475, 497, 504 and 543.

100. Sandby sn., Ekelunda

a 1 sol. Marcian found while plowing, 1853 (SHM 1982). Montelius 152; Hauberg 241; Janse 78; Bolin 142.58a; Stenberger 282. Cat. No. 359.

b 1 sol. Anthemius found in a field, 1863 (SHM 3118). Montelius 153; Hauberg 221; Janse 77; Bolin 142.58b; Stenberger 282. Cat. No. 158.

c 1 sol. Leo I found at Ekelunda no. 1, 1863 (SHM 3138). Montelius 151; Hauberg 251; Janse 79; Bolin 142.58b; Stenberger 282. Cat. No. 496.

101. Sandby sn., Norra Sandby

1 sol. Libius Severus found on surface of ground, 1845 (SHM 1188). Montelius 154; Hauberg 207; Janse 80; Bolin 142.50. Stenberger 282. Cat. No. 134.

102. Sandby sn., Vället

1 sol. Majorian found in a field, 1899 (SHM 10771). Janse 81; Bolin 142.61; Stenberger 282. Cat. No. 112.

103. Segerstad sn., Mellby

1 sol. Anthemius; not acquired. Stenberger 282.

104. Segerstad sn., Segerstad no. 1

1 sol. Leo I found in a field, 1873 (SHM 5005). Salin 38; Hauberg 255; Janse 83; Bolin 142.63; Stenberger 282. Cat. No. 476.

105. Segerstad sn.

1 sol. Valentinian III; not acquired. Stenberger 282.

106. Smedby sn., Smedby  
1 sol. Pulcheria; not acquired. Montelius 143; Hauberg 243; Janse 84; Bolin 142.64; Stenberger 284.
107. Smedby sn.  
1 sol. Honorius; not acquired. Stenberger 282.
108. Södra Möckleby sn., Gettlinge  
a 1 sol. Libius Severus found in the ground, 1860 (SHM 2777). Montelius 142; Hauberg 210; Janse 67; Bolin 142.70b; Stenberger 284. Cat. No. 144.  
b 1 sol. (or 2?)<sup>16</sup> Valentinian III found in a field, 1880 (SHM 6665). Salin 8; Hauberg 200; Janse 66; Bolin 142.70a; Stenberger 284. Cat. Nos. 45 and 65.
109. Södra Möckleby sn., Södra Möckleby  
a 1 sol. Valentinian III found in a field, 1892 (SHM 9323). Salin 7; Janse 68; Bolin 142.72a; Stenberger 284. Cat. No. 55.  
b 1 sol. Theodosius II found in a field between S. Möckleby and Albrunna, 1924 (SHM 10063). Janse 69; Bolin 142.72b; Stenberger 284. Cat. No. 315.
110. Stenåsa sn., Fröslunda  
a 1 sol. Honorius found while plowing, 1904 (SHM 12202). Janse 85; Bolin 142.65a; Stenberger 284. Cat. No. 8.  
b 1 sol. Leo I found while plowing, 1904 (SHM 12262). Janse 87; Bolin 142.65c; Stenberger 284. Cat. No. 446.  
c 3 sol.: 1 Valentinian III, 1 Libius Severus and 1 Marcian<sup>17</sup> found in a field, Fröslunda no. 4, 1906 (SHM 12933); a C-bracteate was found in the same field in 1941 (SHM 22753). Janse 86; Bolin 142.65b; Stenberger 284. Cat. Nos. 35, 122 and 366.
111. Stenåsa sn., Lilla Brunneby no. 2  
1 sol. Marcian (SHM ?). *NNA* 1944, 265; not among coins examined at SHM.

<sup>16</sup> Archives record only one coin but two coins in the cabinet have "6665" written in ink on them. No. 45 with a mint mark of R M agrees with the description in the archives; No. 65 has a Ravenna mint mark.

<sup>17</sup> Janse and Bolin erroneously list Arcadius for Marcian.

112. Stenåsa sn., Norra Kvinneby  
2 sol.: Theodosius II found in same field at different times, 1862 (SHM 2944, 2992). Montelius 148; Hauberg 190; Janse 88; Bolin 142.66; Stenberger 284. Cat. Nos. 261 and 330.
113. Stenåsa sn., Stenåsa  
a 1 sol. Zeno found with an electrum spiral by a stone while digging in a mound, 1865 (SHM 3449). Montelius 147; Hauberg 263; Janse 91; Bolin 142.67b; Stenberger 284. Cat. No. 613.  
b 1 sol. Leo I found while plowing, 1866 (SHM 3584). Montelius 146; Hauberg 253; Janse 90; Bolin 142.67a; Stenberger 284. Cat. No. 423.  
c 1 sol. Anthemius found by a stone while working in a field, 1921 (SHM 16684). Bolin 142.67d; Stenberger 284. Cat. No. 160.  
d 1 sol. Marcian found in a field, Stenåsa no. 2, in 1923 (SHM 17328); possibly from same field as 113c. Bolin 142.67c; Stenberger 284. Cat. No. 353.  
e 1 sol. Honorius found in a field, 1951 (SHM 24583). *NNÄ* 1953, 236. Cat. No. 1.
114. Stenåsa sn., Stora Brunneby  
a 1 sol. Theodosius II found at St. Brunneby no. 1, 1906 (SHM 12778). Janse 89; Bolin 142.68; Stenberger 284. Cat. No. 227.  
b 1 sol. Marcian found at St. Brunneby no. 4 (SHM 21108). *NNÄ* 1936, 233. Cat. No. 351.  
c 1 sol. Theodosius II found 1942 (SHM 22977). *NNÄ* 1943, 181. Cat. No. 300.
- 115.<sup>18</sup> Torslunda sn., Björnhovda  
36 sol.: 2 Honorius, 8 Valentinian III, 5 Libius Severus, 1 Arcadius, 9 Theodosius II, 1 Eudocia, 2 Marcian, 7 Leo I and 1 Basil-

<sup>18</sup> The coins from SHM 3247, 3258 and 3274 have been mixed together but the bulk of the hoard is from one find, SHM 3247, with 21 coins: 1 Honorius, 7 Valentinian III, 2 Libius Severus, 1 Arcadius, 6 Theodosius II, 3 Leo I and 1 Basiliscus. Cat. No. 126 (SHM 4449) has not been placed with the others in the SHM but the archives record that it is from the same field. The coin of Eudocia is usually listed as Eudoxia.

iscus, found in same field at different times, 1864-70, with remains of a leather purse (SHM 3247, 3258, 3274, 4449). Montelius 156; Montelius (1872) 75.22; Hauberg 186, 212; Janse 92, 93; Bolin 142.73a, b; Stenberger 284. Cat. Nos. 3, 4, 29, 30, 37, 41, 42, 52, 61, 95, 121, 126, 127, 135, 137, 192, 196, 199, 200, 203, 207, 214, 223, 224, 270, 332, 358, 371, 388, 402, 433, 439, 532, 533, 537 and 623.

116. Torslunda sn., Färjestaden  
a 1 sol. Leo I; not acquired. Bolin 142.74; Stenberger 284.  
b 1 sol. Valentinian III found 1924 (SHM 17636). Stenberger 284. Cat. No. 34.
117. Torslunda sn., Kåtorp  
a 1 sol. Theodosius II found in a field, 1869 (SHM 4181). Montelius (1872) 75.21; Hauberg 233; Janse 94; Bolin 142.75a; Stenberger 284. Cat. No. 208.  
b 1 sol. Theodosius II found in a field, 1904 (SHM 12279). Janse 95; Bolin 142.75b; Stenberger 284. Cat. No. 349.
118. Torslunda sn., Skogsby  
a 1 sol. Libius Severus found 1854 (SHM 2023). Montelius 155; Hauberg 209; Janse 96; Bolin 142.76a; Stenberger 284. Cat. No. 141.  
b 1 sol. Libius Severus found in a field, 1892 (SHM 9002); not among coins examined at SHM. Salin 20; Hauberg 218; Janse 98; Bolin 142.76c; Stenberger 284.  
c 1 sol. Valentinian III found while plowing on a site of a pre-historic house foundation, 1924 (SHM 17911). Bolin 142.76b; Stenberger 284. Cat. No. 86.
119. Torslunda sn., Torsborg  
1 sol. Libius Severus found in a field, 1878 (SHM 6253). Salin 16; Hauberg 214; Janse 97; Bolin 143.77; Stenberger 284. Cat. No. 131.
120. Vickelby sn., Stora Frö  
1 sol. Valentinian III found 1856 (SHM 2267). Montelius 150; Hauberg 197; Janse 99; Bolin 143.78; Stenberger 284. Cat. No. 63.

## 121. Öland, find-place unknown

- a 1 sol. Valentinian III (SHM). Cat. No. 73.
- b 1 sol. Libius Severus (Kalmar?). Montelius 139; Hauberg 206; Janse 100–101; Bolin 143.81.
- c 1 sol. Anthemius found 1874 (SHM 5186). Salin 21; Hauberg 222; Janse 103; Bolin 143.82. Cat. No. 155.
- d 1 sol. Anthemius (Kalmar?). Montelius 139; Hauberg 219; Janse 102; Bolin 143.83.
- e 1 sol. Anthemius; not available. Bolin 143.86.
- f<sup>19</sup> 1 sol. Theodosius II (SHM). Cat. No. 269.
- g 1 sol. Leo I (Kalmar 25.384). Cat. No. 411.
- h<sup>20</sup> 1 sol. Leo I and others; not available. Montelius 140; Hauberg 244; Janse 52; Bolin 143.79.
- i 1 sol. Zeno (Kalmar ?). Montelius 139; Hauberg 260; Janse 104; Bolin 143.84.

SWEDEN — GOTLAND (see Nerman, pp. 59–62)

122.<sup>21</sup> Akebäck sn., Smiss

25 sol.: 2 Honorius, 3 Valentinian III, 1 Theodosius II, 2 Marcian, 1 Zeno, 8 Anastasius, 7 Justinian I and 1 Theodebert found with several gold fragments, 2 denarii and one bronze piece in same field, 1929–32 (SHM 19130, 19310, 19536, 19800, 20214). Arne, *AA* 1931, 1–28; Mosser 1. Cat. Nos. 5, 14, 38, 62, 66, 340, 354, 368, 582, 630, 632, 648, 660, 670, 688, 717, 718, 733, 734, 735, 736, 739, 740, 741 and 749.

## 123. Ala sn., Lauritze

1 sol. Anastasius found in a field, 1847 (SHM 1367). Montelius 206; Hauberg 304; Janse 105; Bolin 133.3. Cat. No. 680.

## 124. Alskog sn., Snovalls

1 sol. Marcian found 1862 (SHM 3022). Montelius 209; Hauberg 276; Janse 106; Bolin 133.5. Cat. No. 377.

<sup>19</sup> The inventory number on this coin is not legible.

<sup>20</sup> Janse et. al. list find-place as "Le Landborg."

<sup>21</sup> Cat. Nos. 670 (SHM 19800), 718 and 734 (SHM 20214) were discovered subsequent to the publication of the hoard by Arne. Nos. 368 and 740—SHM 19130; Nos. 38, 340, 582, 630, 632, 660, 736 and 737—SHM 19536; the remaining 12 coins—SHM 19310.

125. Alva sn., Östres  
1 sol. Zeno found 1859 (SHM 2645). Montelius 215; Hauberg 295; Janse 107; Bolin 133.8. Cat. No. 594.
126. Atlingbo sn., Isums  
1 sol. Theodosius II found 1862 (SHM 3021). Montelius 203; Hauberg 275; Janse 108; Bolin 133.9. Cat. No. 195.
127. Barlingbo sn., Enbjeme  
1 sol. Honorius found in a field, 1928 (SHM 18924). Cat. No. 25.
128. Barlingbo sn., Norrbys  
a 1 sol. Majorian found while plowing in a field, 1876 (SHM 5808). Salin 13; Hauberg 272; Janse 109; Bolin 133.10a. Cat. No. 106.  
b 1 sol. Leo I found in a field, 1899 (SHM 10774). Janse 110; Bolin 133.10b. Cat. No. 501.
129. Björke sn., Hakuse  
1 sol. Leo I found in a field (SHM 6433); not among coins examined at SHM. Salin 46; Hauberg 284; Janse 111; Bolin 133.11.
130. Björke sn., Harkvie  
a 1 sol. Leo I (SHM 20157); not among coins examined at SHM. Nerman p. 59.  
b 6 sol.: 1 Theodosius II, 3 Leo I, 1 Zeno and 1 Anastasius found with a gold spiral ring, a denarius of Antoninus Pius and a faience bead, in the same field, 1940-41 (SHM 22543, 22732). *NNÅ* 1941, 257; 1942, 245. Cat. Nos. 255, 491, 502, 509, 572 and 712.
131. Björke sn.  
1 sol. Leo I found while plowing in a field, 1916 (SHM 15569). Cat. No. 505.
132. Burs sn., Flors  
1 sol. Theodosius II found in a field, 1893 (SHM 9164). Salin 31; Janse 112; Bolin 134.15. Cat. No. 238.



133. Eke sn., Alveskog  
1 sol. Justinian I found in a field, 1869 (SHM 4070). Montelius 237; Hauberg 320; Janse 113; Bolin 134.21. Cat No. 745.
134. Endre sn., Båcks  
1 sol. Anastasius found in a field, 1924 (SHM 9658). Janse 114; Bolin 134.23. Cat. No. 709.
135. Eskelhem sn., Övede  
11 sol.: 2 Honorius, 1 Majorian, 1 Libius Severus, 1 Anthemius, 1 Leo I and 5 Anastasius, found with a gold spiral and gold button by a stone belonging to an old stone-circle (SHM 2747). Montelius 200; Hauberg 269; Janse 116; Bolin 134.30; Mosser 31. Cat. Nos. 16, 21, 98, 142, 168, 459, 635, 636, 652, 654 and 694.
136. Eskelhem sn., Sigvards  
5 sol.: 1 Honorius, 1 Anthemius, 1 Theodosius II, 1 Leo I and 1 Basiliscus found with 28 second century denarii by an old stone fence, 1703; no longer available. Montelius 201; Hauberg 268; Janse 115; Bolin 134.28.
137. Etelhem sn., Botes  
a<sup>22</sup> 1 sol. Anastasius found while plowing in a field, 1875 (SHM 5639). Salin 57; Hauberg 314; Janse 117; Bolin 134.31. Cat. No. 644.  
b<sup>23</sup> 82 sol.: 5 Honorius, 5 Valentinian III, 2 Majorian, 1 Anthemius, 1 Julius Nepos, 1 Arcadius, 14 Theodosius II, 4 Marcian, 18 Leo I, 8 Zeno, 1 Basiliscus, 18 Anastasius and 4 Justin I, found with remains of a sack in same field, 1929-35 (SHM 19155, 19523, 19788, 20802). Arne, *AA* 1931, 1-28; Mosser 32. Cat. Nos. 6, 18, 22, 26, 27, 32, 39, 53, 54, 89, 105, 111, 167, 175, 191, 197, 201, 206, 211, 213, 232, 235, 236, 249, 251, 273, 295, 341, 342, 352, 370, 372, 373, 382, 383.

<sup>22</sup> Arne and Nerman suggest the possibility that this is part of the hoard. No. 137b; however, this cannot be known for certain.

<sup>23</sup> Cat. Nos. 382, 573 and 668 (SHM 20802) are separated from the other coins of this hoard in the SHM but the archives state that they were found in the same place. Nos. 342, 516, 661 and 727 (SHM 19788) were discovered subsequent to the publication of the hoard by Arne; Nos. 191, 249, 399, 466, 483, 606 and 676—SHM 19523; the remaining 68 coins—SHM 19155.

395, 398, 399, 401, 417, 430, 445, 456, 466, 483, 484, 488, 503, 510, 516, 525, 548, 555, 567, 568, 573, 577, 578, 606, 624, 633, 638, 645, 661, 665, 668, 673, 675, 676, 679, 687, 691, 695, 704, 706, 710, 713, 716, 725, 726, 727 and 730.

c 1 sol. Leo I (SHM 21010). *NNA* 1936, 233. Cat. No. 474.

138. Etelhem sn., Kyrkeby  
1 barbaric sol. found in a field, 1870 (SHM 4333). Montelius (1872) 83.33; Hauberg 323; Janse 118; Bolin 134.34. Cat. No. 758.
139. Etelhem sn., Tänglings  
1 sol. Anastasius found in a field, 1898 (SHM 10641). Janse 119; Bolin 134.35. Cat. No. 663.
140. Etelhem sn., Vestringen  
1 sol. Justinian I found with a gold finger ring in a field (SHM 22374). Cat. No. 731.
141. Etelhem sn.  
1 sol. Anastasius (Visby ?). Montelius 208; Hauberg 302; Janse 120; Bolin 134.33.
142. Fardhem sn., Burge  
1 sol. Anastasius found in a field, 1892 (SHM 9081). Salin 52; Hauberg 319; Janse 121; Bolin 134.36. Cat. No. 643.
143. Fardhem sn., Nederburge  
1 sol. Anastasius found 1861 (SHM 2848). Montelius 214; Hauberg 305; Janse 122; Bolin 134.37. Cat. No. 659
144. Fardhem sn., Överburge  
1 sol. Anastasius found in a field, 1911 (SHM 12349 but in Visby). Janse 123; Bolin 134.38. Cat. No. 686.
145. Follingbo sn., Lilla Vede  
1 sol. Anastasius found while digging, 1870 (SHM 4334). Montelius (1872) 82.30; Hauberg 309; Janse 124; Bolin 135.44. Cat. No. 707.
146. Fröjel sn., Ansarve  
1 sol. Anastasius found 1862 (SHM 2999). Montelius 210; Hauberg 306; Janse 125; Bolin 135.45. Cat. No. 640.

147.<sup>24</sup> Fröjel sn., Kaupe

5 sol.: 1 Theodosius II, 2 Leo I, 1 Zeno and 1 Anastasius found in same field, 1901-12 (SHM 11408, 12499, 13092, 14672, 17703). Janse 126-28; Bolin 135.46a-d. Cat. Nos. 312, 418, 512, 579 and 671.

148.<sup>25</sup> Fröjel sn., Rovide

1 sol. Leo I found 1922 (SHM 17043). Bolin 135.46A. Cat. No. 508.

## 149. Gammelgarn sn., Davide

1 sol. Anthemius (SHM 24992). *NNA* 1954, 158. Cat. No. 151.

## 150. Gerum sn., Uddvide

1 sol. Zeno found while plowing, 1843 (SHM 1071). Montelius 211; Hauberg 291. Janse 132; Bolin 135.53. Cat. No. 598.

## 151. Gothem sn., Jusarve

1 sol. Zeno found with a silver spiral in a field, 1875 (SHM 5572). Salin 48; Hauberg 296; Janse 129; Bolin 135.49. Cat. No. 607.

## 152. Gothem sn. (?)

1 sol. Leo I (SHM 462). Montelius 197; Hauberg 279; Janse 181; Bolin 139.144. Cat. No. 531.

## 153. Grötlingbo sn., Norrkvie

a 1 sol. Zeno found with a denarius of Antoninus Pius in a field (SHM 15952). Janse 130; Bolin 135.50. Cat. No. 552.

b 1 sol. Anastasius (SHM 20356). Cat. No. 690.

c 1 sol. Theodosius II (SHM 21018). *NNA* 1936, 233. Cat. No. 318.

## 154. Hablingbo sn., Lilla Burge

1 sol. Basiliscus and Marcus found 1882 (SHM 7001). Usually listed under Gerum sn. Salin 49; Hauberg 298; Janse 131; Bolin 135.52. Cat. No. 628.

<sup>24</sup> Cat. No. 312 (SHM 17703) is separated from the others in the SHM but Nerman (p. 61) states that they are all from the same field. No. 418—SHM 12499; No. 512—SHM 13092; No. 570—SHM 14672; No. 671—SHM 11408.

<sup>25</sup> This coin is from the display case and its identification with SHM 17043 is not certain.

155. Hangvar sn., Gullauser  
1 sol. Anastasius found while plowing, 1893 (SHM 7060). Salin 50; Hauberg 316; Janse 133; Bolin 135.60. Cat. No. 662.
156. Havdem sn., Rosarve  
a<sup>26</sup> 5 sol.: 1 Theodosius II, 2 Anastasius, 1 Justin I and 1 uncertain imitation found in same field at different times (SHM 13860, 14687, 15512, 20357); a gold wire was found in the same field earlier (SHM 2704). Janse 134, 136, 137; Bolin 136.62b, c, 63. Cat. Nos. 316, 667, 669, 729 and 755.  
b 1 sol. Leo I found in a gravel pit with 15 denarii and some bronze objects (SHM 14486). Janse 135; Bolin 136.62a. Cat. No. 507.
157. Hejde sn., Skogs  
1 sol. Zeno found in a field by a pile of stones (SHM 1868); not among coins examined at SHM. Montelius 207; Hauberg 294; Janse 138; Bolin 136.65.
158. Hejnum sn., Bjärs  
2 sol. Anastasius found in same field, 1868–70 (SHM 3854, 4330). Montelius 196; Montelius (1872) 82.29; Hauberg 307–8; Janse 139–40; Bolin 136.66. Cat. Nos. 711 and 715.
159. Hörsne sn., Mallgårds  
1 barbaric sol. found while plowing in a field, 1869 (SHM 4218). Montelius (1872) 82.31; Hauberg 322; Janse 141; Bolin 136.72. Cat. No. 751.
160. Hörsne sn., Nybjers  
1 sol. Anastasius found while plowing, 1893 (SHM 7061). Salin 54; Hauberg 317; Janse 142; Bolin 136.74. Cat. No. 642.
161. Linde sn., Duckarve  
1 sol. Anastasius found in a field, 1875 (SHM 5570). Salin 58; Hauberg 313; Janse 143; Bolin 136.77. Cat. No. 714.

<sup>26</sup> Cat. No. 669 (SHM 20357) is separated from the others in the SHM but the archives have cross references to the other finds.

162. Linde sn., Myrungs  
 a 1 sol. Leo I found while digging in a field, 1884 (SHM 7377). Salin 39; Hauberg 285; Janse 144; Bolin 136.79b. Cat. No. 517.  
 b 1 sol. Zeno found in a field, 1922 (SHM 16902). Bolin 136.79c. Cat. No. 605.  
 c 1 sol. Justinian I (SHM 18443). Cat. No. 738.
163. Martebo sn., Kvie  
 1 sol. Anastasius found in a field, 1895 (SHM 9938). Janse 145; Bolin 137.86. Cat. No. 708.
164. Mästerby sn., Bander  
 a 1 sol. Leo I found in a field (SHM 11173). Janse 147 (uncertain); Bolin 137.89. Cat. No. 427.  
 b 1 sol. Justin I found near Bander, 1908 (SHM 13459). Janse 146; Bolin 137.87 (Justinian I). Cat. No. 728.  
 c 1 sol. Justin I found 1933 (SHM 20377). Cat. No. 723.  
 d 1 sol. Theodosius II perhaps from same field as 164b, found 1950 (SHM 25651). *NNA* 1958, 278. Cat. No. 239.
165. Mästerby sn., Ringome  
 1 sol. Leo I found 1862 (SHM 2956). Montelius 202; Hauberg 282; Janse 148; Bolin 137.90. Cat. No. 381.
- 166.<sup>27</sup> När sn., Nixdjup  
 7 sol.: 3 Zeno and 4 Anastasius found in same field at different times (SHM 724, 1791); only one coin of Zeno can be identified. Montelius 212-13; Hauberg 270, 293; Janse 150, 151; Bolin 137.93a, b; Mosser 58. Cat. No. 596.
167. Norrlanda sn., Ekeskogs  
 1 sol. Anastasius found in a field, 1870 (SHM 4395). Montelius (1872) 83.32; Hauberg 310; Janse 149; Bolin 137.91. Cat. No. 672.
168. Roma sn., Roma Kungsgård  
 a 2 sol.: 1 Leo I and 1 Zeno found while plowing in a field, 1821 (SHM 1498). Montelius 198; Hauberg 267; Janse 152; Bolin 137.94a. Cat. Nos. 481 and 559.

<sup>27</sup> Two solidi of Zeno and 4 of Anastasius found in 1836 (SHM 724) cannot be identified in the SHM.

- b 1 sol. Anastasius; not acquired. Montelius 199; Hauberg 301; Janse 153; Bolin 137.94b.
169. Rute sn., Alvans  
4 sol.: 1 Leo I and 3 Zeno found with 3 gold spirals and 1 gold finger ring while plowing (SHM 3308); archives list find as consisting of 2 sol. Leo and 2 sol. Zeno. Montelius 192; Hauberg 266; Janse 154; Bolin 137.95. Cat. Nos. 453, 546, 550 and 556.
170. Silte sn. (often listed as Slite sn.), Snosarve  
a 1 sol. Libius Severus found in a field, 1870 (SHM 4331). Montelius (1872) 83.34; Hauberg 273; Janse 156; Bolin 138.102a. Cat. No. 116.  
b 1 sol. Justinian I found 1880 (SHM 6615). Salin 60; Hauberg 321; Janse 157; Bolin 138.102b. Cat. No. 737.
171. Sjonhem sn., Görvide  
1 sol. Anastasius found in a field, 1904 (SHM 12164). Janse 155; Bolin 137.98. Cat. No. 634.
172. Stånga sn., Stånga  
1 sol. Justinian I found in a field (SHM 18823). Cat. No. 732.
173. Stenkyrka sn., Garde  
1 sol. Anastasius found in a field, 1874 (SHM 5333). Salin 59; Hauberg 312; Janse 158; Bolin 138.105. Cat. No. 682.
174. Stenkyrka sn., Grausne  
1 sol. Anastasius found while plowing, 1936 (SHM 21364). *NNÄ* 1937, 198. Cat. No. 692.
175. Tingstäde sn., Träskväller  
a 1 sol. Zeno found in a field, 1838 (SHM 820). Montelius 193; Hauberg 290. Janse 161; Bolin 138.110c. Cat. No. 617.  
b<sup>28</sup> 1 sol. Leo I found in a field, 1843 (SHM 1082). Montelius 195; Hauberg 280; Janse 159; Bolin 138.109. Cat. No. 527.  
c 1 sol. Leo I found while plowing, 1855 (SHM 2174). Montelius 194; Hauberg 281; Janse 160; Bolin 138.110b. Cat. No. 415.
- <sup>28</sup> The find-place is sometimes listed as Myrväller.

176. Vall sn., Hardings  
5 sol.:<sup>29</sup> 1 Majorian, 1 Leo I, 2 Anastasius and 1 uncertain imitation found with a gold spiral in same field, 1876–1921 (SHM 5807, 5965, 6422, 8586, 16964). Salin 36, 51, 56, 61; Hauberg 283, 315, 324; Janse 162–65; Bolin 138.111 a, b. Cat. Nos. 99, 492, 639, 658 and 757.
177. Vänge sn., Norrbys  
1 sol. Anastasius found with a denarius of Antoninus Pius on the site of an old dwelling, 1844 (SHM 1153). Montelius 205; Hauberg 303; Janse 168; Bolin 138.118. Cat. No. 683.
178. Vänge sn., Prästbåtels  
2 sol.: 1 Anastasius and 1 Justin I<sup>30</sup> found with 2 bronze objects and a denarius of Faustina in same field (SHM 4985, 15183). Salin 55; Hauberg 311; Janse 166, 167; Bolin 138.119 a, b. Cat. Nos. 684 and 724.
179. Vänge sn., Rovalds  
a<sup>31</sup> 8 sol.: 1 Theodosius II, 2 Zeno, 4 Anastasius and 1 Justinian I found in same field, 1902–04 (SHM 11656, 11657, 11723, 12101, 12102). Janse 169–73; Bolin 138.120; Mosser 74. Cat. Nos. 331, 593, 597, 664, 681, 685, 689 and 743.  
b 1 sol. Justinian I found in a field, 1924 (SHM 17405). Cat. No. 742.  
c 2 sol. Theodosius II (SHM 19920). Cat. Nos. 243 and 250.
180. Väte sn., Juves  
1 sol. Anastasius found in a field, 1886 (SHM 8028). Salin 53; Hauberg 318; Janse 174; Bolin 139.128. Cat. No. 631.
181. Väte sn., Smide  
1 sol. Zeno found while plowing, 1843 (SHM 1081). Montelius 204; Hauberg 292; Janse 175; Bolin 139.129. Cat. No. 592.

<sup>29</sup> A third solidus of Anastasius perhaps belongs with this find (*NNA* 1944, 265) which was not among coins examined at the SHM.

<sup>30</sup> Janse and Bolin erroneously list Justinian I for Justin I.

<sup>31</sup> Archives state that they were all from the same field, but see Nerman, p. 61.

## 182. Gotland, find-place unknown

- a 1 sol. Honorius (SHM 10613). Janse 176 (uncertain); Bolin 139.144. Cat. No. 24.
- b 1 sol. Honorius (Visby). Cat. No. 12.
- c 1 sol. Honorius (Visby). Janse 177; Montelius 191; Hauberg 271; Bolin 139.144. Cat. No. 15.
- d 1 sol. Julius Nepos (LUHM). Cat. No. 181.
- e 1 sol. Theodosius II (Visby). Cat. No. 336.
- f 1 sol. Theodosius II found before 1829 (SHM 578); not among coins examined at SHM. Montelius 188; Hauberg 274; Janse 178; Bolin 139.144.
- g 1 sol. Leo I (Visby). Cat. No. 473.
- h 1 sol. Leo I (Visby). Cat. No. 397.
- i 1 sol. Leo I (Visby). Montelius 191; Hauberg 277; Janse 180; Bolin 139.144. Cat. No. 449.
- j 1 sol. Zeno (Visby). Cat. No. 616.
- k 1 sol. Zeno (Visby). Montelius 191; Hauberg 289; Janse 185; Bolin 139.144. Cat. No. 557.
- l 1 sol. Zeno (Visby) Montelius 191; Hauberg 288; Janse 184; Bolin 139.144. Cat. No. 549.
- m 1 sol. Ariadne (Visby). Montelius 191; Hauberg 297; Janse 186; Bolin 139.144. Cat. No. 619.
- n 1 sol. Leo II and Zeno (Visby). Montelius 190; Hauberg 286; Janse 182; Bolin 139.144. Cat. No. 544.
- o 1 sol. Anastasius (Visby). Cat. No. 653.
- p 1 sol. Anastasius (Visby). Cat. No. 657.
- q 1 sol. Anastasius (Visby). Cat. No. 646.
- r 1 sol. Anastasius (Visby). Cat. No. 699.

## SWEDEN find-place unknown

183. 5 sol.: 1 Honorius, 1 Libius Severus, 1 Theodosius II, 1 Marcian and 1 Leo I; stray finds (SHM 6236). Salin 4, 18, 34, 35, 37; Janse 231-35. Cat. Nos. 10, 146, 218, 367 and 403.



DENMARK — JUTLAND a = amt (county); h = herred (district)

184. Ålborg a., Års h., Års  
2 sol.: 1 Valentinian III and 1 uncertain imitation found in same place with 3 gold spirals and 2 gold bracteates, 1901 (NMC F.P. 853, Inv. C 11369); in 1914 in same place a gold bracteate similar to one of the above was found. Galster, *NFM* 1924, 189.29; Balling 64.89. Cat. Nos. 96 and 759.
185. Haderslev a., Sønder-Tyrstrup h., Stepping  
1 sol. Anastasius found while digging in a field; sent in 1901 (NMC F.P. 1559). Galster, *NFM* 1924, 189.33; Balling 68.95. Cat. No. 700.
186. Randers a., Galten h., Kinbjerg  
1 barbaric sol. Julius Nepos found while plowing, 1670 (NMC). Several gold objects reputedly found in same place earlier. Bolin 148.2; Balling 66.93. Cat. No. 184.
187. Randers a., Mols h., Eeg  
1 sol. Leo I, sent in 1853 (NMC Inv. 13623). Montelius 233. Hauberg 144; Bolin 148.3; Balling 65.90. Cat. No. 460.
188. Ribe a., Anst h., Jordrup  
2 sol.: 1 Libius Severus and 1 Leo II and Zeno found in same place at different times (NMC Inv. C 9536; 19/09). Neergaard p. 197; Galster, *NFM* 1924, 189.31; Bolin 148.7; Balling 65.91. Cat. Nos. 147 and 541.
189. Ribe a., Skast h., Brøndum sogn  
1 barbaric sol. Justinian I (?) found while plowing, 1832 (NMC). Balling 68.94. Cat. No. 747.
190. Vejle a., Brusk h., Ejstrup  
1 sol. Libius Severus found on surface of ground; sent in 1861 (NMC Inv. 19695). Balling 66.92. Cat. No. 136.
191. Vejle a., Brusk h., Eltang  
1 barbaric sol. Justinian I, sent in 1924 (NMC F.P. 1590). Balling 69.97. Cat. No. 746.

## DENMARK — FYEN

192. Odense a., Bjerge h., Midskov skov  
1 barbaric sol. Julius Nepos, sent in 1909 (NMC F.P. 1166).  
Neergard p. 198; Galster, *NFM* 1924, 189.32; Bolin 147.14;  
Breitenstein, "Fyen" 16.XXVII. Cat. No. 183.
193. Odense a., Bjerge h., Rynkebygård  
5 sol.: 1 Valentinian III, 1 Marcian and 3 Leo I found with a  
gold spiral ring, a gold bracteate with runes and an electrum  
bar, 1848 (NMC Inv. 10038, F.P. 72). Montelius 231; Hauberg  
123; Bolin 147.20; Breitenstein, "Gudme Herred" 89.X. Cat.  
Nos. 77, 369, 414, 486 and 493.
194. Svendborg a., Gudme h., Elsehoved  
8 sol.: 1 Valentinian III, 1 Majorian, 2 Leo I, 1 Zeno and 3  
Anastasius found with 9 gold spirals, a gold fibula, a gold spiral  
ring and a gold bar. Most of hoard was discovered in 1833 and  
subsequent finds were made in 1849, 1865 and 1873 (NMC Inv.  
2700-01, 10575, 22375, C 1532). Montelius 229, 232; Montelius  
(1872) 74.14; Hauberg 145, 147; Bolin 147.8; Breitenstein,  
"Gudme Herred" 90.XI. Cat. Nos. 93, 108, 448, 458, 604, 655,  
677 and 703.
195. Svendborg a., Salling h., Sallinge  
1 sol. Theodosius II found while plowing, 1863 (NMC Inv.  
21307). Montelius 230; Hauberg 141; Bolin 147.23; Breiten-  
stein, "Fyen" 16.XXVI. Cat. No. 210.

## DENMARK — ZEALAND

196. Københavns a., Sokkelund h., Hvidore  
1 sol. Leo I found near Hvidore, 1869 (NMC F.P. 309); known  
by description only. Hauberg 143; Bolin 146.10; Breitenstein,  
"Sjælland" 26.40. Cat. No. 440.
197. Københavns a., Sokkelund h., Slotfruens Vænge  
1 sol. Theodosius II found in a field, 1919 (NMC F.P. 1446).  
Galster, *NFM* 1924, 189.27; Breitenstein, "Sjælland" 26.39.  
Cat. No. 265.

198. Præstø a., Bjæverskov h., Herfølge  
1 sol. Theodosius II found on "Herfølge Mark," sent in 1853 (NMC Inv. 18617). Montelius 228; Hauberg 140; Bolin 146.8; Breitenstein, "Sjælland" 25.38. Cat. No. 274.
199. Præstø a., Mønbo h., Lille-Damme  
1 sol. Valentinian III found while plowing, ca. 1937 (NMC F.P. 2072). *NNA* 1943, 163, fig. 2; Breitenstein, "Sjælland" 24.37. Cat. No. 85.
200. Sorø a., Alsted h., Assentorp  
1 sol. Leo I found on "Assentorp Mark," 1868 (NMC F.P. 304). Known by description only. Hauberg 142; Bolin 146.1; Breitenstein, "Sjælland" 26.41. Cat. No. 520.
201. Sorø a., Slagelse h., Voldstedt Rollerup  
1 barbaric triens Justinian I found at "Valdemarskilde Mark," ca. 1880 (NMC F.P. 1484). Galster, *NFM* 1924, 189.34; Breitenstein, "Sjælland" 27.42. Cat. No. 748.

## DENMARK — BORNHOLM

202. Nørre h., Hasle byvang  
1 sol. Leo I found in a field, sent in 1929 (NMC F.P. 1707). Breitenstein, "Bornholm" 76.41; Klindt-Jensen 234.4. Cat. No. 455.
203. Nørre h., Kåsbygård  
14 sol.: 2 Valentinian III, 1 Anthemius, 4 Theodosius II, 4 Leo I, 2 Zeno and 1 uncertain imitation found with several gold items. 1839; 4 are known by description only (NMC F.P. 3).<sup>32</sup> Montelius 221; Hauberg 165; Bolin 145.5. Breitenstein, "Bornholm" 58.23; Klindt-Jensen 233.2. Cat. Nos. 83, 88, 152, 204, 210, 264, 305, 413, 494, 514, 521, 609, 614 and 750.
- 204.<sup>33</sup> Øster h., Brændesgård  
2 sol.: 1 Theodosius II and 1 Leo I found near site of Iron Age house, at different times (NMC F.P. 2345, 2414).<sup>34</sup> Breitenstein, "Bornholm" 75.38; *NNA* 1955, 157; Klindt-Jensen 235.21, 24. Cat. Nos. 343 and 540.

<sup>32</sup> Nos. 264 and 609 are in the Thorvaldsen Museum, Copenhagen.

<sup>33</sup> Klindt-Jensen lists the find-place of the coin of Theodosius II as Sorte Mulde.

<sup>34</sup> No. 540 in Bornholm Museum at Rønne (?).

205. Øster h., Dalshøj  
17 sol.: 2 Valentinian III, 1 Majorian, 1 Anthemius, 7 Theodosius II, 1 Leo I, 4 Zeno and 1 Anastasius found during excavations at Dalshøj (NMC F.P. 2251, 2273). Breitenstein, *Fra Nationalmuseets arbejdsmark* 1951, 24 ff.; Klindt-Jensen 185 ff. and 235.22. Cat. Nos. 51, 92, 103, 149, 209, 221, 225, 311, 313, 320, 337, 412, 562, 571, 583, 608 and 637.
206. Øster h., Frennegård  
1 sol. Zeno found while plowing, 1925 (NMC F.P. 1623).<sup>35</sup> Breitenstein, "Bornholm" 77.44; Klindt-Jensen 235.28. Cat. No. 588.
207. Øster h., Gudhjem  
1 sol. Valentinian III, sent in 1891 (NMC F.P. 591, Inv. C 6661). Hauberg 172; Bolin 145.4; Breitenstein, "Bornholm" 72.31; Klindt-Jensen 234.7. Cat. No. 97.
208. Øster h., Kirsæløkkegård  
1 fragment of a sol. of Justin I found while digging in ground, sent in 1860 (NMC Inv. 19452, F.P. 220). Montelius 238; Hauberg 183; Bolin 145.7, 146.31; Breitenstein, "Bornholm" 78.46; Klindt-Jensen 234.11, fig. 198.
209. Øster h., Kløvegård  
2 sol. Honorius found while plowing 1864; only one was sent in (NMC F.P. 260). Montelius 225; Hauberg 171; Bolin 145.8; Breitenstein, "Bornholm" 71.30; Klindt-Jensen 235.16. Cat. No. 28.
210. Øster h., Lappegård  
1 sol. Libius Severus found on site of Iron Age house; sent in 1875 (NMC F.P. 378); no longer available. Hauberg 176; Bolin 145.10; Breitenstein, "Bornholm" 73.33; Klindt-Jensen 235.25-26.
211. Øster h., Øster-Marie sogn  
1 sol. Leo I sent in 1843 (NMC F.P. 22; sold to Thorvaldsen Museum, 1848). Montelius 224; Hauberg 179; Bolin 146.27b; Breitenstein, "Bornholm" 75.39; Klindt-Jensen 237.51a. Cat. No. 457.
- <sup>35</sup> In Bornholm Museum, Rønne (?).

## 212. Øster h., Saltholm

29 sol.: 1 Honorius, 1 Valentinian III, 3 Libius Severus, 1 Glycerius, 9 Theodosius II, 1 Marcian, 5 Leo I, 5 Zeno, 1 Leontius, 1 Anastasius and 1 uncertain imitation; found, along with an electrum bar, while digging in a field, 1882 (NMC Inv. C 4811-13, F.P. 475). Hauberg 169; Bolin 145.14; Breitenstein, "Bornholm" 52.22; Klindt-Jensen 235.30. Cat. Nos. 23, 75, 118, 119, 129, 174, 229, 245, 258, 266, 275, 289, 293, 321, 348, 364, 396, 404, 431, 465, 523, 558, 560, 586, 595, 615, 629, 651 and 756.

## 213. Øster h., Spagergård

7 sol.: 1 Valentinian III, 1 Theodosius II, 2 Leo I, 2 Zeno and 1 Anastasius; only 1 of Zeno now available; sent in 1860 (NMC F.P. 216). Montelius 222; Hauberg 168; Bolin 146.21; Breitenstein, "Bornholm" 66.25; Klindt-Jensen 234.13. Cat. No. 580.

## 214. Øster h., near Svaneke

a 3 sol.: 1 Theodosius II, 1 Marcian and 1 Zeno found with a gold "gubbe;" sent in 1838; no longer available. Montelius 219; Hauberg 166; Bolin 146.22a; Breitenstein, "Bornholm" 70.29; Klindt-Jensen 236.48.

b 1 sol. Theodosius II found in a field near Svaneke and sent in, 1853 (NMC F.P. 126). Montelius 220; Hauberg 177; Bolin 146.22b; Breitenstein, "Bornholm" 74.36; Klindt-Jensen 236.49. Cat. No. 198.

## 215. Øster h., near Sylten (see Breitenstein, "Bornholm" 62.24)

a 3 sol.: 1 Valentinian III, 1 Theodosius II and 1 Leo I; found at various times in 19th century on site of Iron Age house where other gold objects and coins were known to have been found; the coin of Valentinian III was not sent in (NMC F.P. 676). Neergard, p. 197; Galster, *NNA* 1937, 68; Klindt-Jensen 235.27. Cat. Nos. 310 and 536.

b 6 sol.: 1 Honorius, 1 Anthemius, 2 Theodosius II and 2 Zeno found in the 18th century; known by description only.<sup>36</sup> Galster, *NNA* 1937, 63ff.; Klindt-Jensen 238.60. Cat. Nos. 171, 282, 288, 553 and 554.

<sup>36</sup> The description of the coin of Honorius was too vague to be included in the catalogue.

216. Sønder h., Kattesletsgård  
1 sol. Libius Severus found in a field, sent in 1870 (NMC F.P. 321). Hauberg 175; Bolin 145.6; Breitenstein, "Bornholm" 73.32; Klindt-Jensen 236.40. Cat. No. 130.
217. Sønder h., Pedersker sogn  
1 sol. Theodosius II found 1763; no longer available. Galster, *NNA* 1937, 63; Breitenstein, "Bornholm" 74.34; Klindt-Jensen 237.52.
218. Sønder h., Sandegård  
4 sol.: 1 Theodosius II and 3 Leo I found with a fragment of a gold bracteate, a gold spiral ring, a gold bar and other objects on site of Iron Age house; sent in 1869; one coin known by description only (NMC Inv. C 336-344, F.P. 313). Hauberg 164; Bolin 145.15; Breitenstein, "Bornholm" 69.28; Klindt-Jensen 236.37. Cat. Nos. 350, 392, 428 and 528.
219. Sønder h., Soldatergård  
36 sol.: 1 Honorius, 5 Valentinian III, 1 Libius Severus, 1 Anthemius, 1 Julius Nepos, 8 Theodosius II, 8 Leo I, 6 Zeno, 1 Basiliscus, 1 Basiliscus and Marcus and 3 Anastasius, found by a stone and sent in, 1850-51 (NMC F.P. 87 and 96);<sup>37</sup> fifteen are known by description only. Montelius 227; Hauberg 170; Bolin 145.19; Breitenstein, "Bornholm" 46.21; Klindt-Jensen 236.36. Cat. Nos. 2, 33, 76, 80, 81, 82, 145, 156, 179, 205, 228, 248, 284, 301, 302, 303, 304, 390, 425, 426, 479, 506, 515, 524, 538, 551, 565, 570, 576, 602, 612, 625, 627, 674, 698 and 719.
220. Vester h., Almindingen  
6 sol.: 1 Valentinian III, 2 Theodosius II, 2 Anastasius and 1 uncertain imitation found by workmen while digging, 1889 (NMC F.P. 561). Hauberg 167; Bolin 145.1; Breitenstein, "Bornholm" 66.26; Klindt-Jensen 236.31. Cat. Nos. 69, 256, 307, 649, 693 and 752.
221. Vester h., Blemmelyng  
1 sol. Zeno sent in 1846 (NMC F.P. 57). Montelius 217; Hauberg 180; Bolin 146.29; Breitenstein, "Bornholm" 77.42; Klindt-Jensen 236.44. Cat. No. 600.

<sup>37</sup> No. 565 in SHM (?) and No. 674 in Thorvaldsen Museum, Copenhagen.

222. Vester h., Nylarsker sogn  
 1 sol. Leo I found in a field northeast of Nylarsker Kirke, sent in 1920 (NMC F.P. 1477). Galster, *NFM* 1924, 189.30; Breitenstein "Bornholm" 76.40; Klindt-Jensen 236.33. Cat. No. 480.
223. Vester h., near Sose  
 1 sol. Anastasius found while plowing; sent in 1850; no longer available (NMC F.P. 91). Montelius 226; Hauberg 182; Bolin 145.20; Breitenstein, "Bornholm" 78.45; Klindt-Jensen 236.35.
224. Bornholm, find-place unknown  
 a 2 sol.: 1 Anthemius and 1 Leo I found in the 1690s; sol. of Leo known by description only. Breitenstein, "Bornholm" 68.27; Klindt-Jensen 237.56. Cat. Nos. 164 and 519.  
 b 1 sol. Theodosius II; no longer available. Breitenstein, "Bornholm" 74.35; Klindt-Jensen 238.58.  
 c 1 sol. Leo I; whereabouts unknown. Galster, *NNA* 1937, 64; Breitenstein, "Bornholm" 74.37; Klindt-Jensen 238.57.  
 d 1 sol. Zeno sent in 1859 (NMC F.P. 197). Montelius 218; Hauberg 181; Bolin 146.30; Breitenstein, "Bornholm" 77.43; Klindt-Jensen 238.59. Cat. No. 584.  
 e 4 sol.: 1 Honoria, 1 Anthemius, 1 Leo I and 1 Zeno known from Ramus' catalogue and presumably found on Bornholm; known by description only. Breitenstein, "Bornholm" 79ff.; Klindt-Jensen 238.64. Cat. Nos. 87, 170, 393 and 591.

## NOTE ON THE PLATES

Plates I–XII illustrate issues from the catalogue. In the catalogue, however, the division between eastern and western emperors is strictly observed whereas on the plates parallel or contemporary issues of eastern and western emperors are brought together. Plate I, for example, illustrates the western issues of Honorius and Arcadius. On Plate IV, the western issues of Leo I which are clearly contemporary with Libius Severus are shown with coins of that emperor, arranged by mint. The catalogue numbers will readily identify the two emperors. Similarly, western issues of Zeno and Basiliscus have been shown with issues of Julius Nepos and Romulus Augustus on Plate VI. Plates VII–VIII are devoted to the various issues of Theodosius II; included with them in juxtaposition are parallel issues of Honorius and the empresses on Plate VII and of Valentinian III on Plate VIII. A solidus of Valentinian III issued by Marcian is shown on Plate IX next to coins of Marcian.

The other plates are self-explanatory. Plates XIII–XVIII are of the imitations.<sup>38</sup> These are followed by two plates with examples of identical dies (Plates XIX–XX), two of jeweled coins (Plates XXI–XXII) and one of repaired coins and mutilated coins (Plate XXIII). Since some coins could be illustrated in more than one place, additional examples in each category can be found elsewhere, e.g., several imitations are illustrated on the plates of jeweled coins and also on the hoard plates. All plate references are given in the catalogue, however, so that any coin can be easily found. Priority was given to the hoards and the latest coins of each hoard are illustrated in that section, Plates XXIV–XXXIII.

<sup>38</sup> The die link indicated on Plate XIII, Nos. 23–24, is a typographical error. See page 136.





## PLATES

I



5



6



8



13



14



15



16



19



190



191



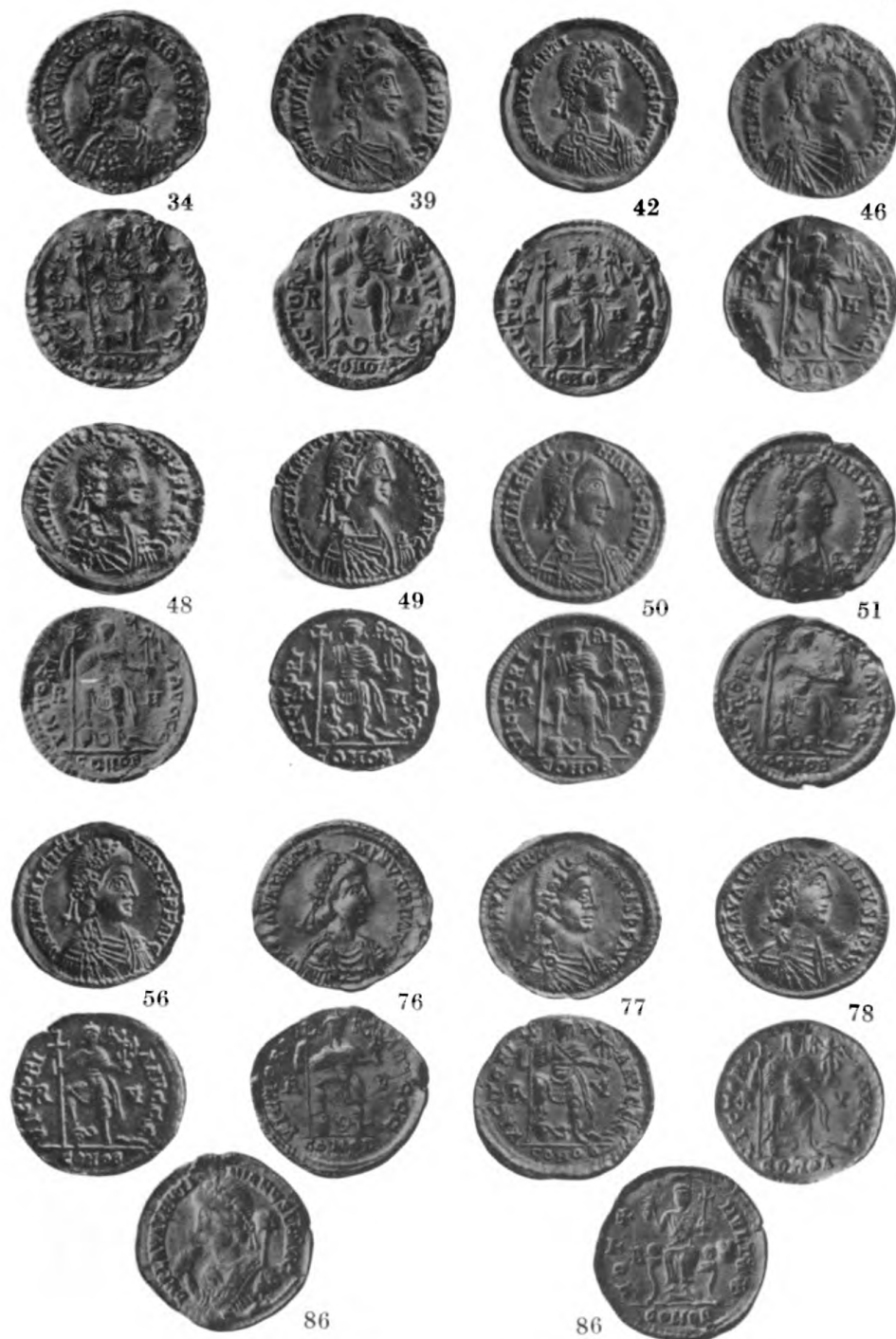
192



193



Honorius, Arcadius  
WESTERN ISSUES



Valentinian III  
WESTERN ISSUES

### III



98



99



100



102



103



106



110



111



112



113



116

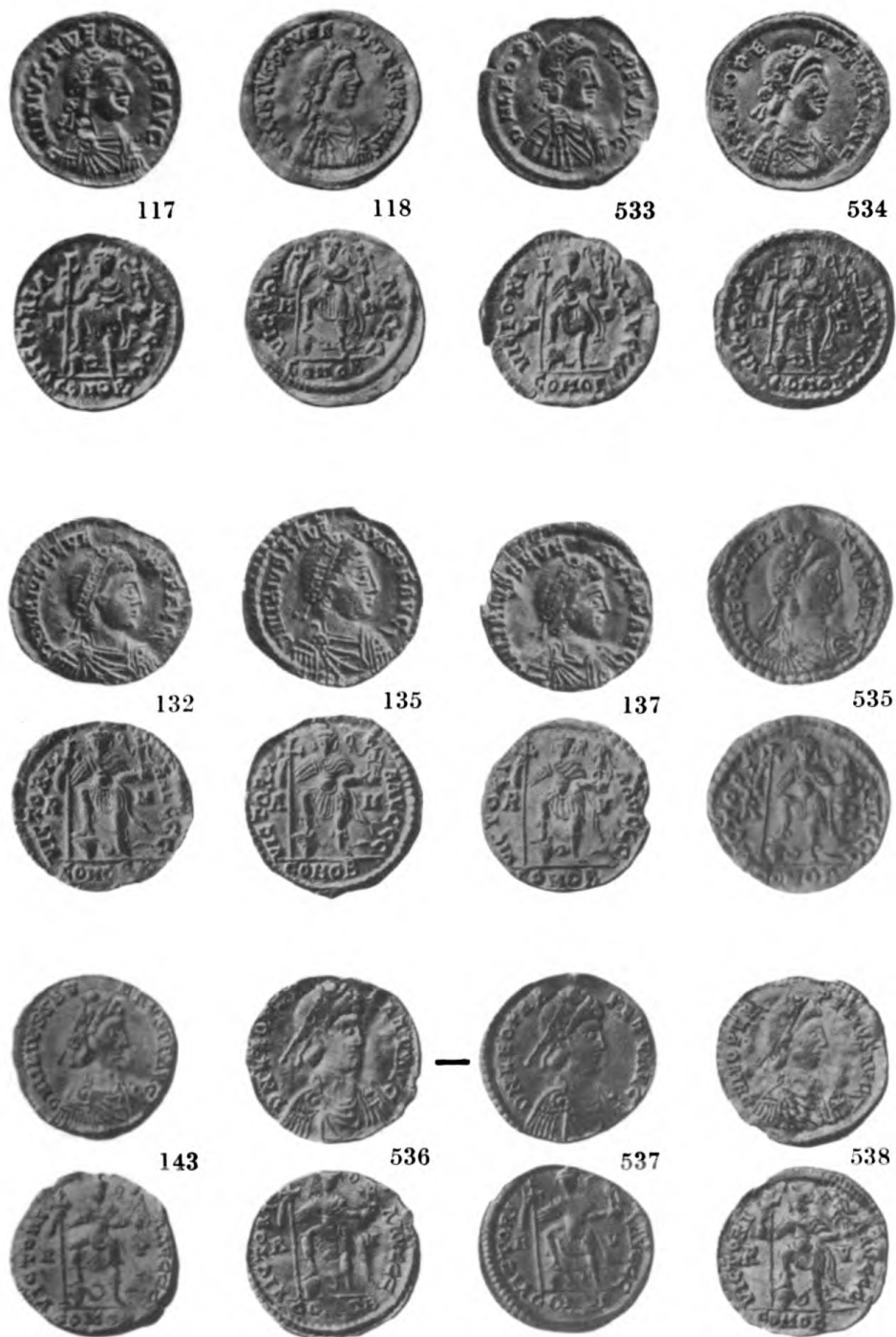


119



Majorian, Libius Severus  
WESTERN ISSUES

IV



Libius Severus, Leo I  
WESTERN ISSUES

V



151



152



153



155



157



158



159



160



164



166



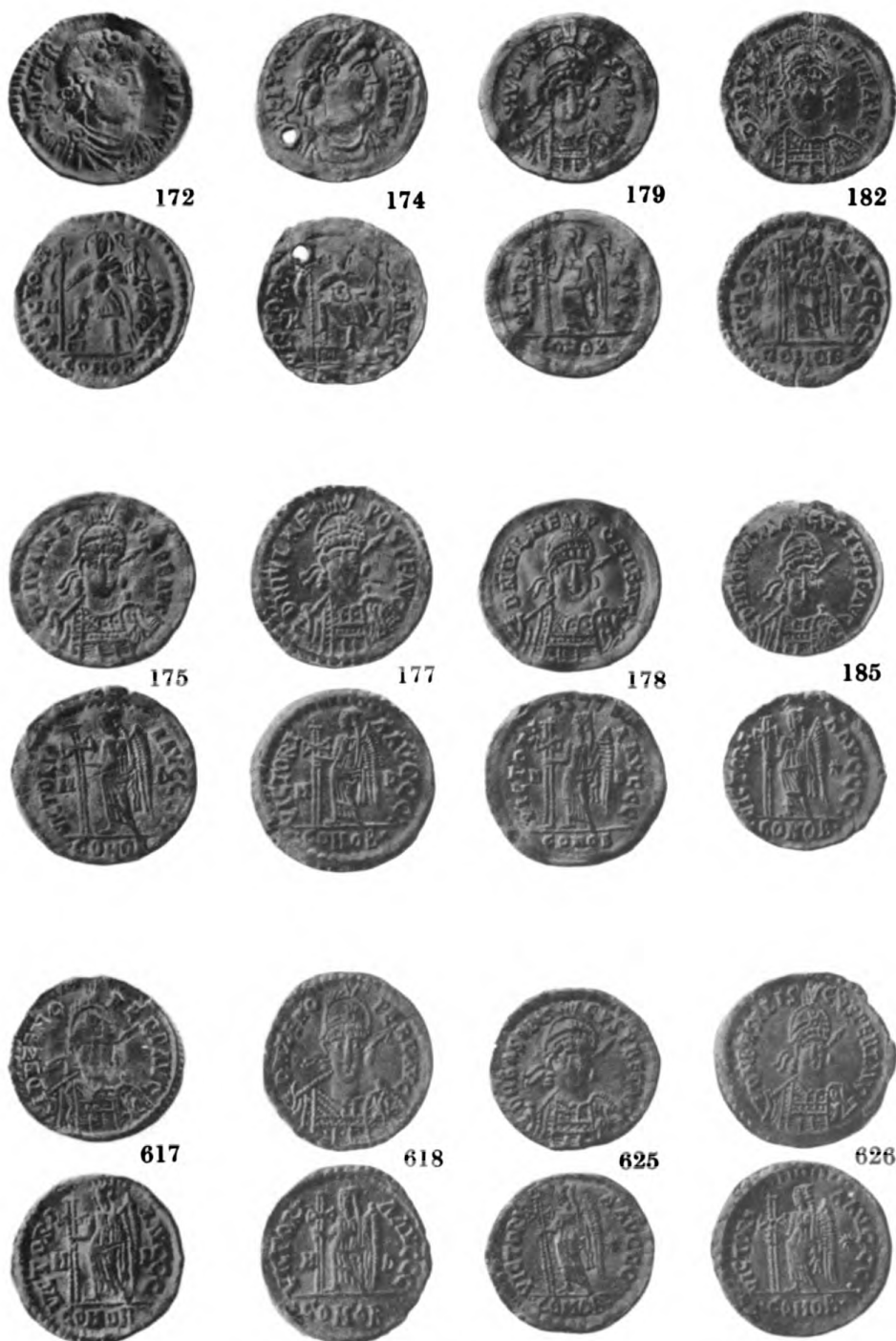
167



169



Anthemius  
WESTERN ISSUES



Glycerius, Julius Nepos, Romulus Augustus, Zeno, Basiliscus  
WESTERN ISSUES



## VII



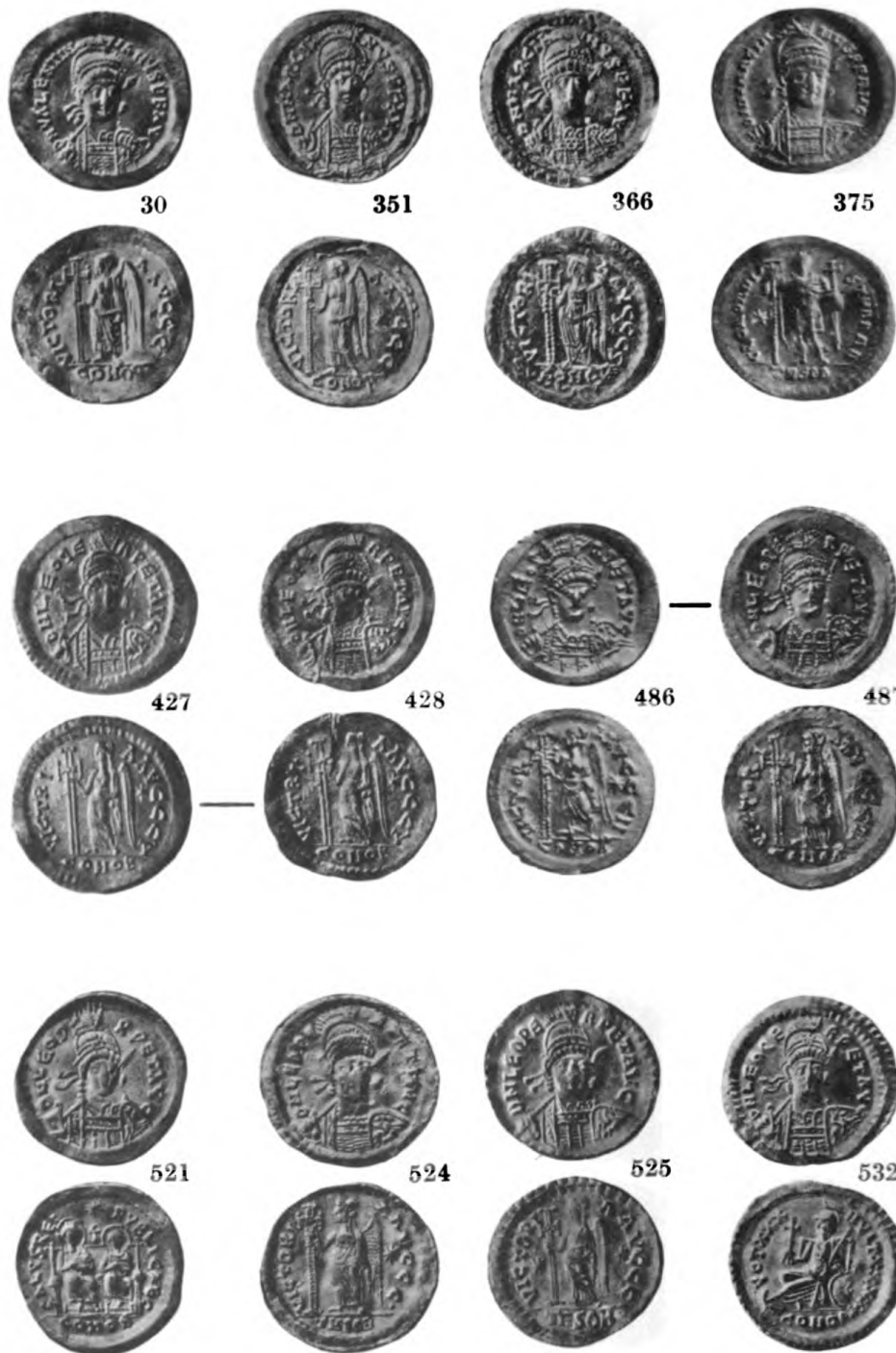
## IMPERIAL ISSUES UNDER THEODOSIUS II

# VIII



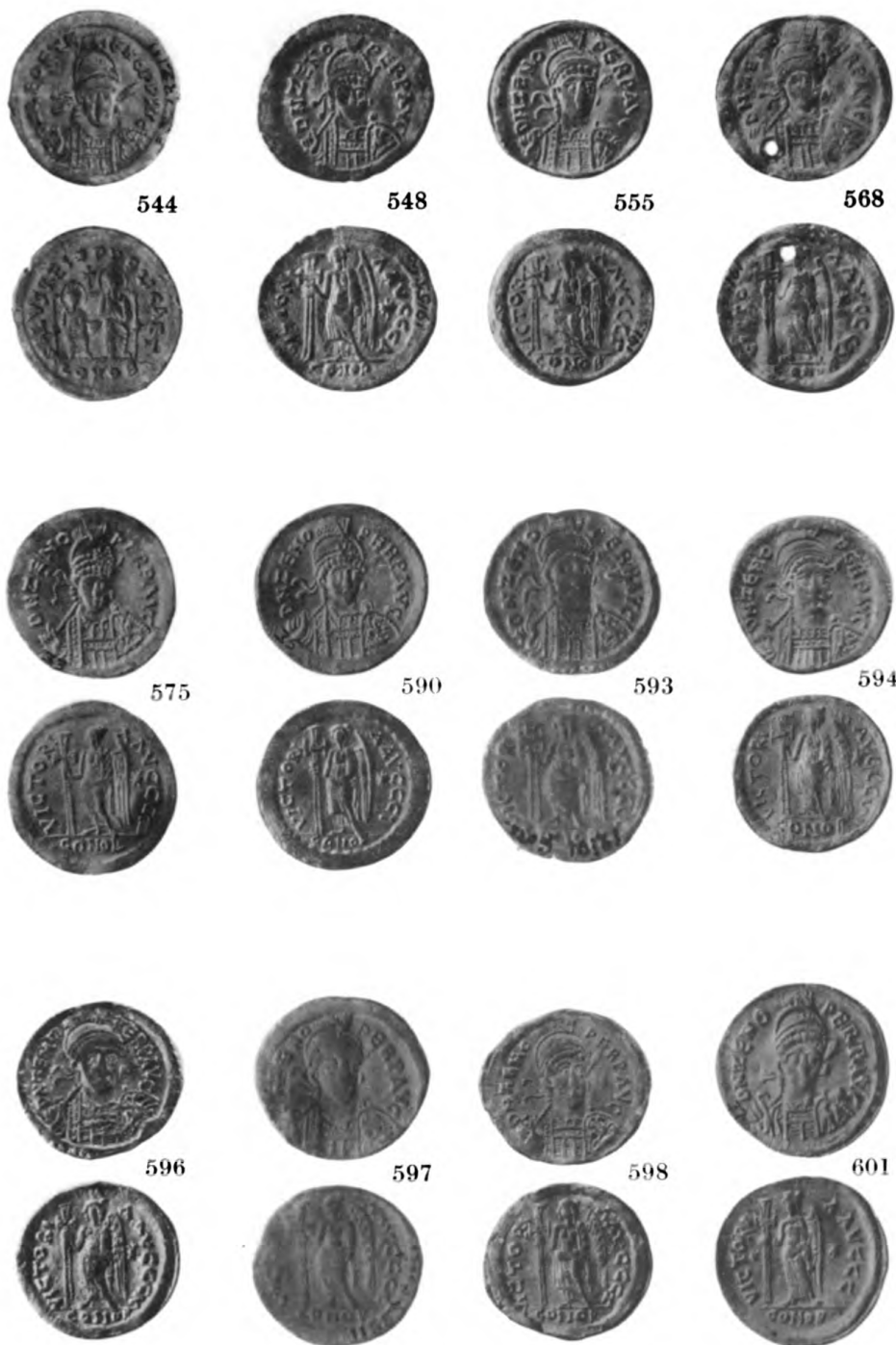
## IMPERIAL ISSUES UNDER THEODOSIUS II

# IX



IMPERIAL ISSUES UNDER MARCIAN, LEO I

X



Leo II and Zeno, Zeno  
IMPERIAL ISSUES

# XI



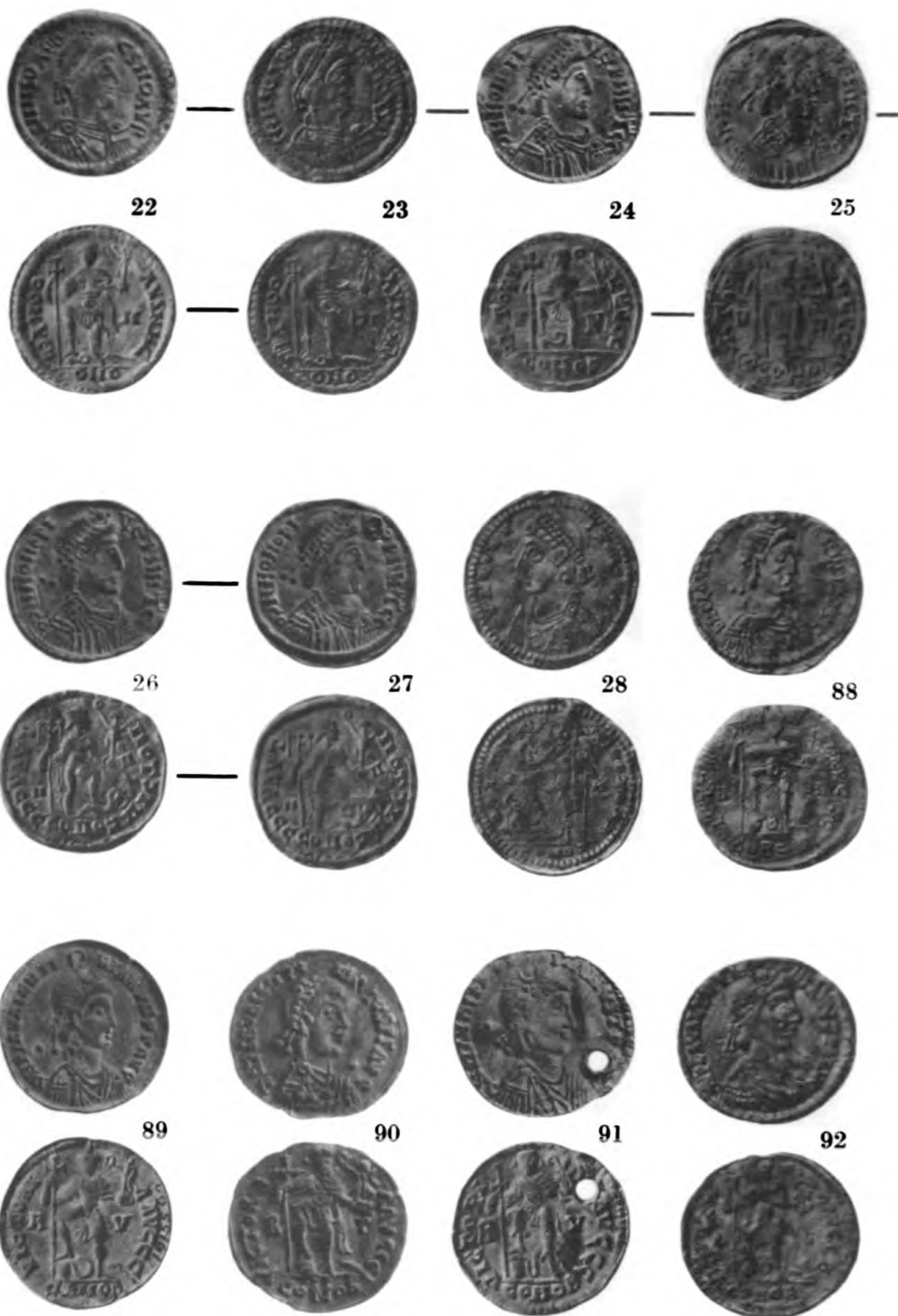
Ariadne, Basiliscus, Basiliscus and Marcus, Leontius, Anastasius  
IMPERIAL ISSUES

XII



Anastasius, Justin I, Justinian I  
IMPERIAL ISSUES

# XIII



Honorius, Valentinian III  
IMITATIONS



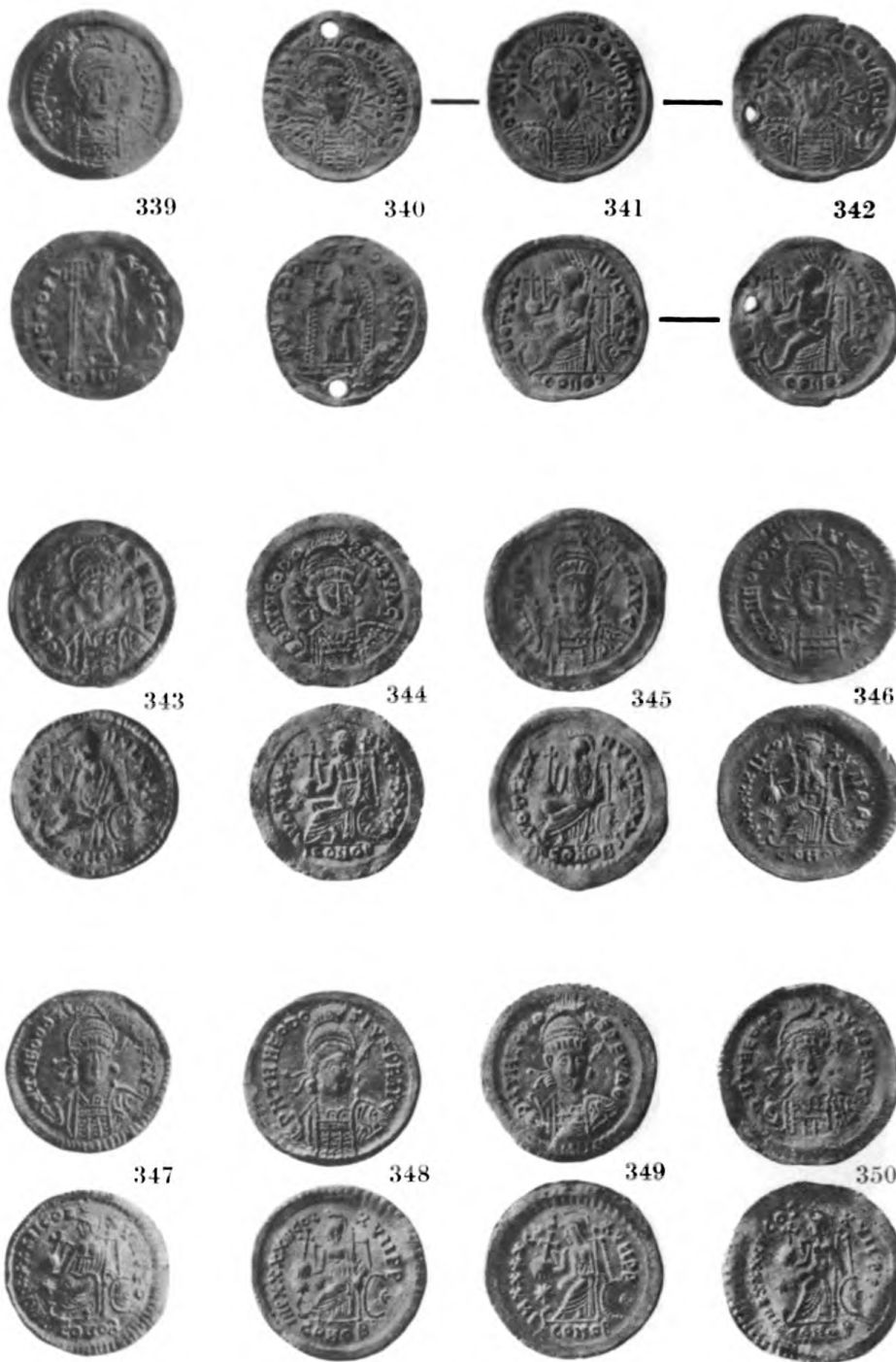
XIV



Valentinian III, Majorian, Libius Severus, Julius Nepos, Theodosius II  
IMITATIONS



XV

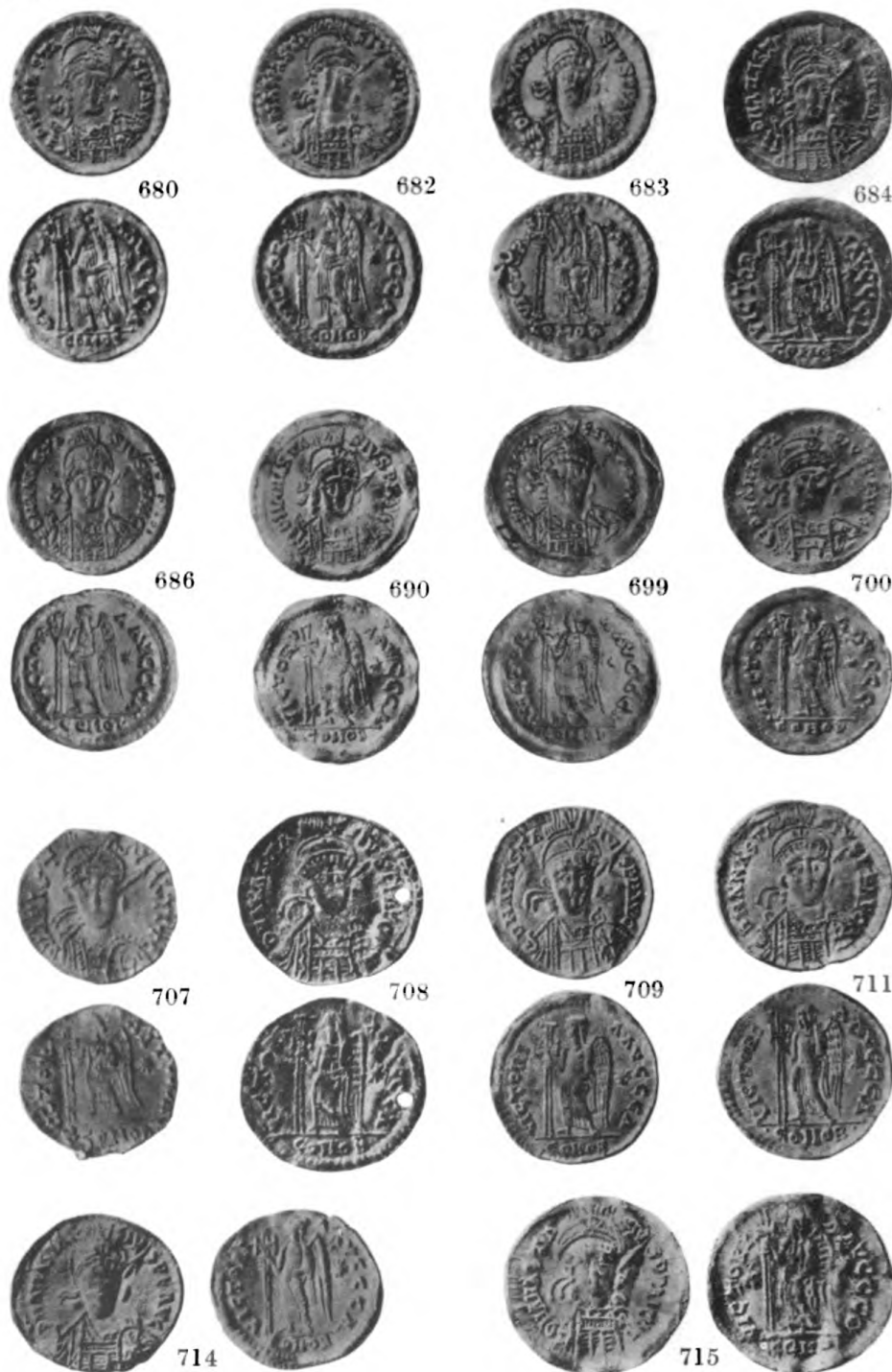


Theodosius II  
IMITATIONS



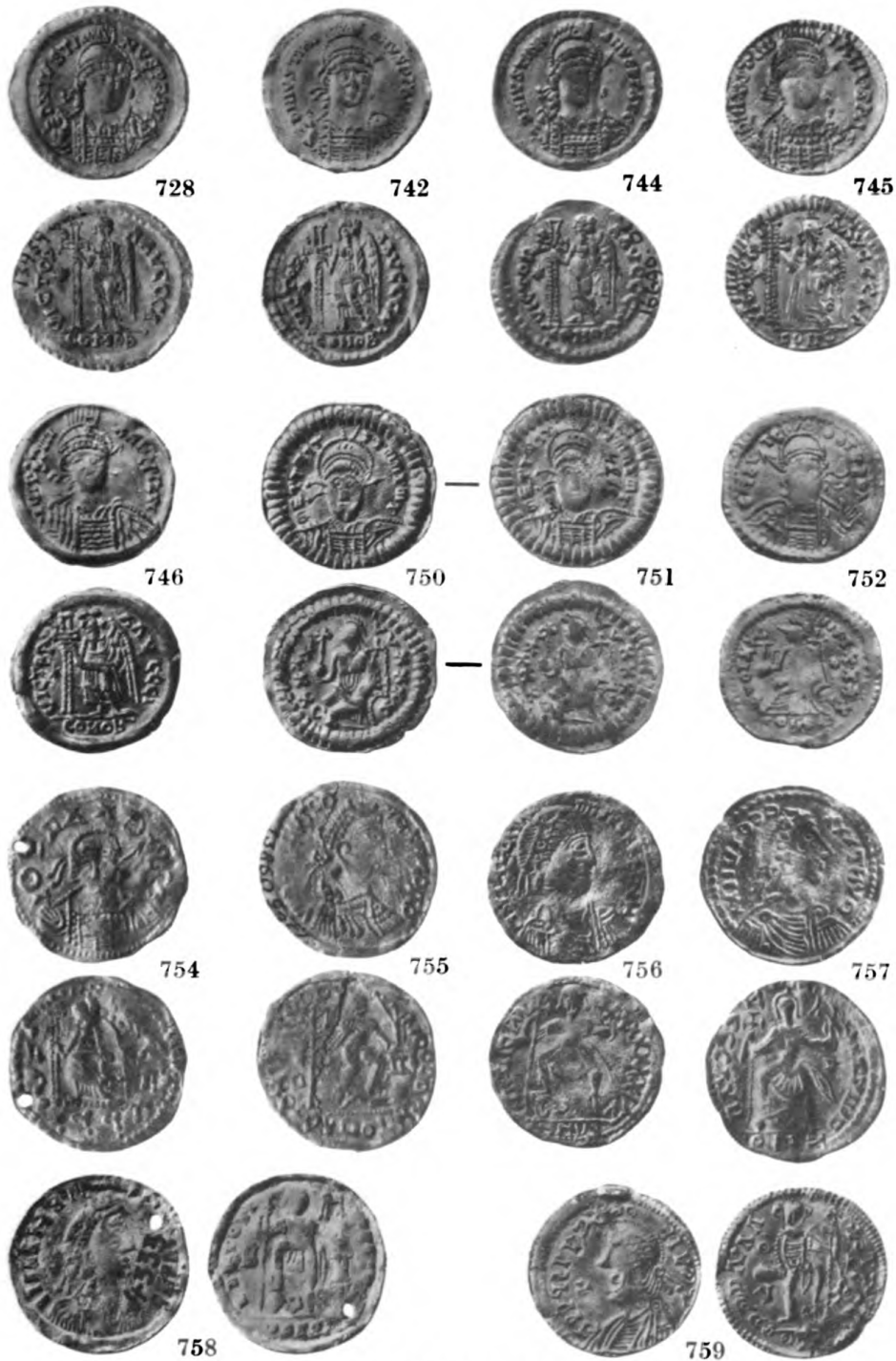
Marcian, Leo I, Zeno  
IMITATIONS

# XVII



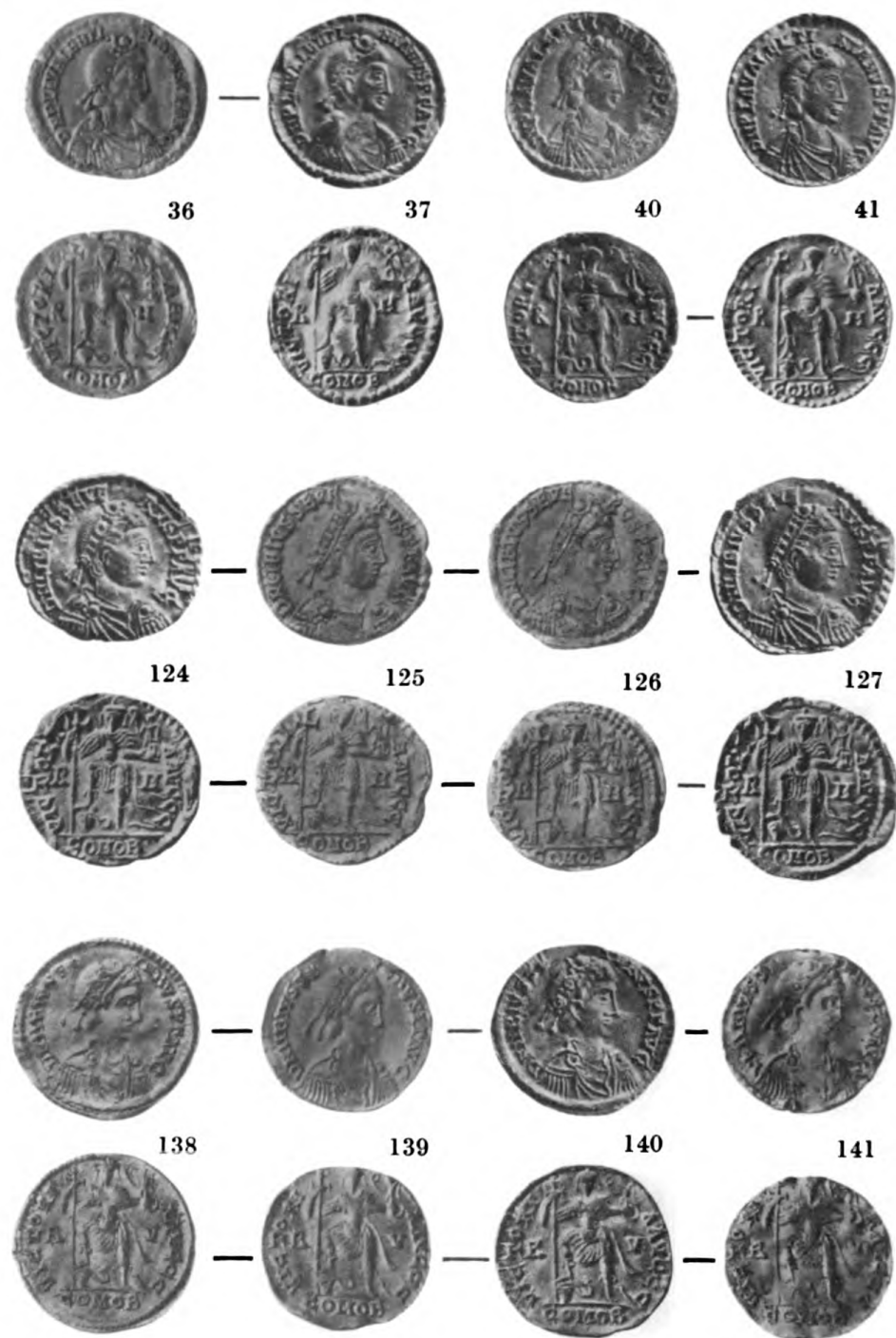
Anastasius  
IMITATIONS

XVIII



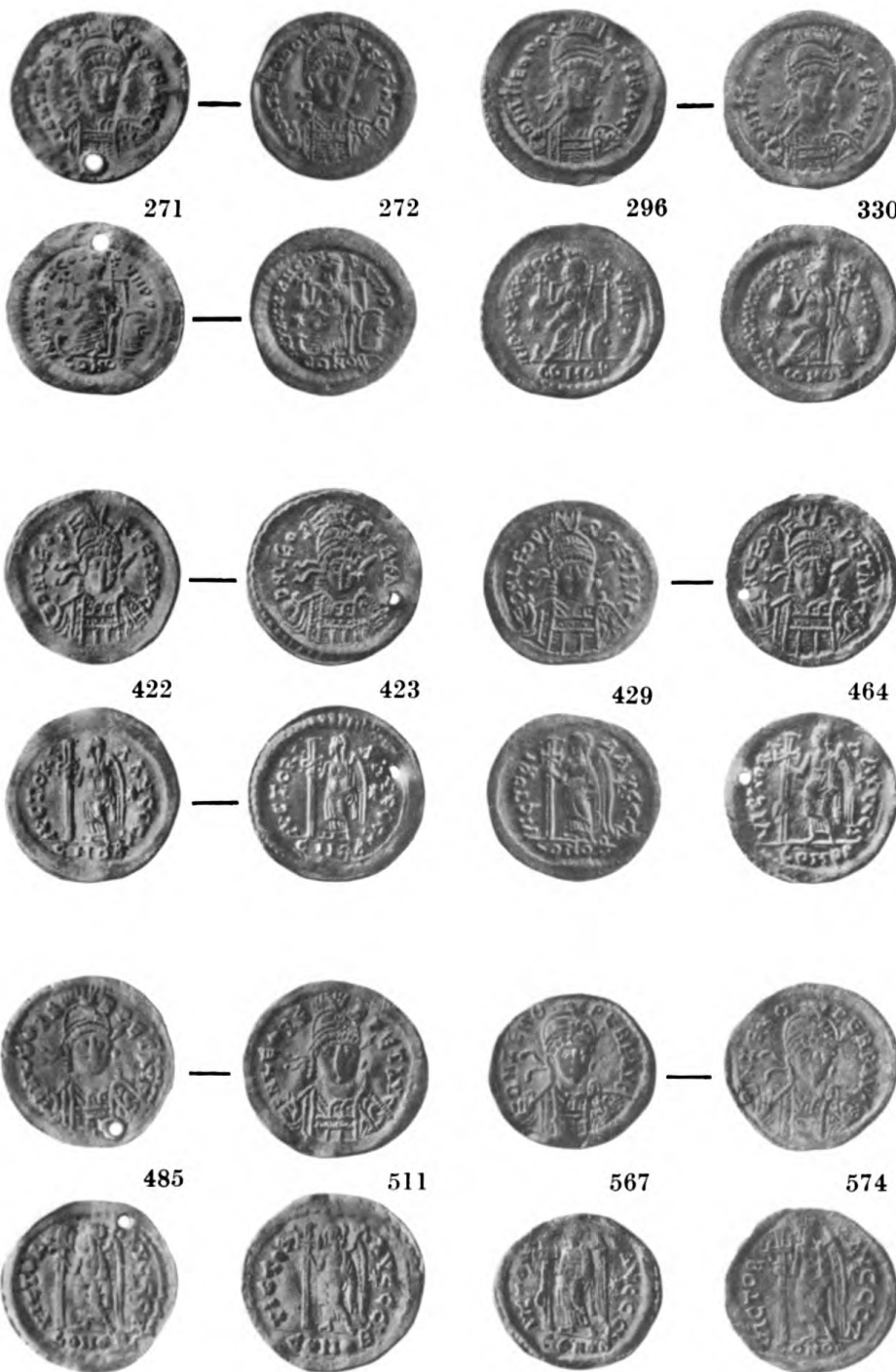
Justin I, Justinian I, Uncertain  
IMITATIONS

# XIX



IDENTICAL DIES

XX



IDENTICAL DIES

# XXI



## COINS AS JEWELRY





Elsehoved Necklace  
COINS AS JEWELRY



# XXIII



47



241



398



456



462



517



592



692



## REFILLED COINS



307



414



488



502



## MUTILATED COINS



Find 87



Find 80a



Find 86

Find 46b



Find 85

## ÖLAND HOARDS

# XXV



173

Find 90 b



623

Find 115



408



409



410



378



420



441



442



443



543



187



Find 99

## ÖLAND HOARDS

XXVI



712



Find 130b



635



636



652



639



658



Find 176



654



694



Find 135



671



Find 147



667



669



729



Find 156a

GOTLAND HOARDS

# XXVII



Find 137b

## GOTLAND HOARDS

XXVIII



Find 137 b

GOTLAND HOARDS

# XXIX



664



681



685



689



743



743

Find 179a



630



632



648



660

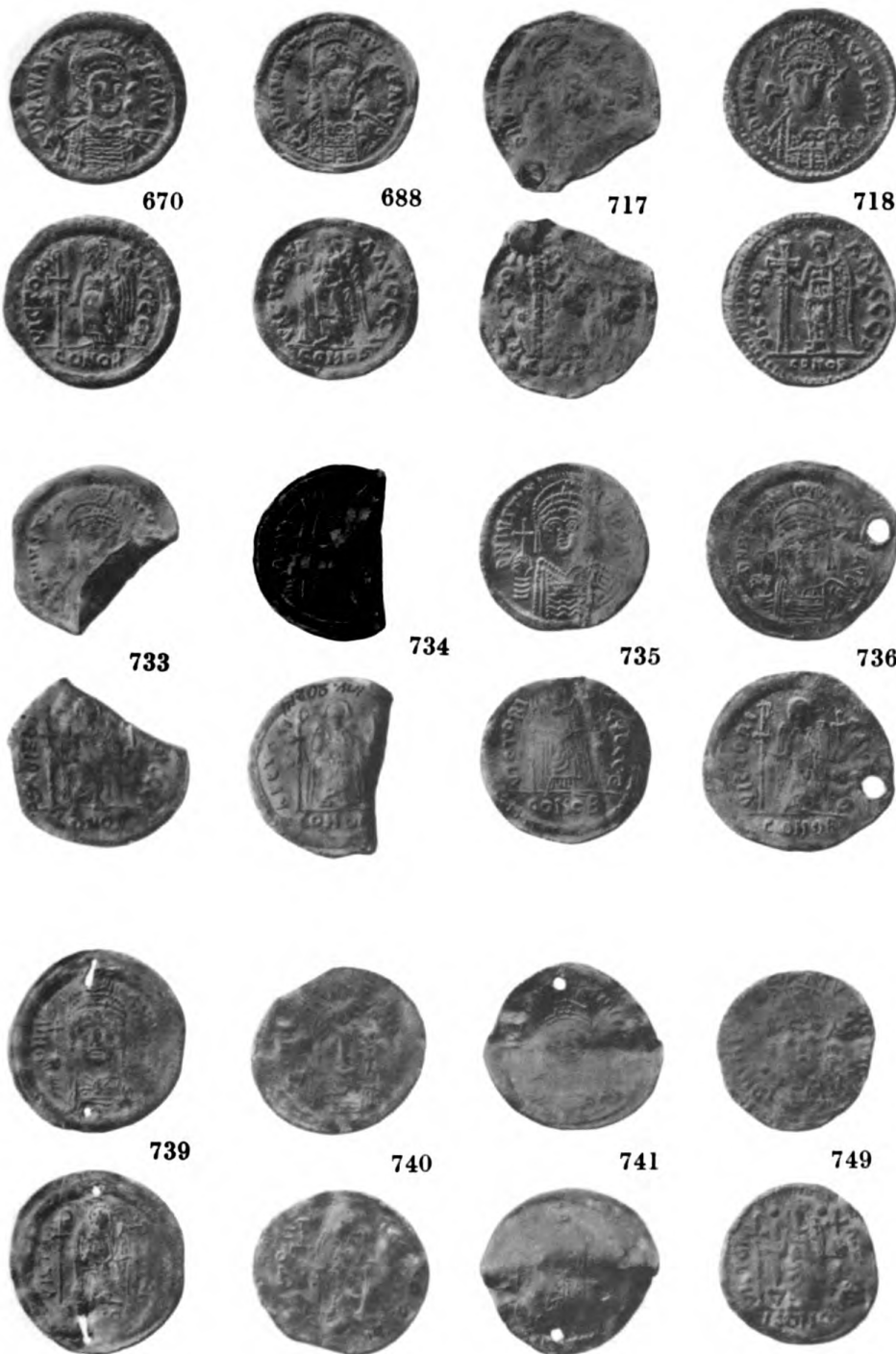


Find 122

GOTLAND HOARDS



XXX



Find 122  
GOTLAND HOARDS



# XXXI



641



647



678



696



697



701



702



705



720



721



Find 6

LILLÖN HOARD



609



Find 203



580



Find 213



558



560



586



595



615



651



Find 212



649



693



Find 220

BORNHOLM HOARDS

# XXXIII



Find 205



Find 219

## BORNHOLM HOARDS



16

16









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